

AREA 317 RCRA QUARTERLY
GROUND WATER MONITORING REPORT NO. 26
JANUARY THROUGH MARCH 1995


WHITTAKER CORPORATION, BERMITE FACILITY
22116 WEST SOLEDAD CANYON ROAD
SANTA CLARITA, CALIFORNIA 91350
AME PROJECT NO. 21001.53

May 22, 1995

Prepared By

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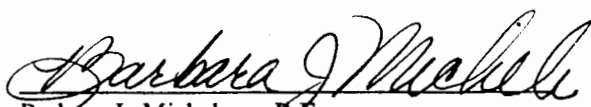
PREPARED BY:


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5/22/95

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**ACTON •
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Consulting Scientists, Engineers, and Geologists

May 22, 1995

Mr. Hamid Saebfar, Chief
Site Mitigation Branch, Region 3
Attn: Whittaker Project Manager
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, California 91201

21001.53/1

Subject: Area 317 RCRA Quarterly Ground Water Monitoring Report No. 26,
January through March 1995, Whittaker Corporation, Bermite Facility
22116 West Soledad Canyon Road, Santa Clarita, California 91350

Dear Mr. Saebfar:

Enclosed is the Area 317 RCRA Quarterly Ground Water Monitoring Report for the first quarter, January through March 1995. The monitoring was completed according to the requirements of the Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment.

The statistical analyses for this sampling event showed that the established tolerance limits for pH, specific conductance, chloride, sulfate, TCE, TOC, or TOX were not exceeded. The tolerance limit for sodium was exceeded for the sample from monitoring well MW-10.

Please call me at (916) 939-7550 if there are any questions regarding the enclosed report.

Sincerely,

ACTON • MICKELSON • van DAM, INC.



Barbara J. Mickelson, P.E.
California Registered Professional Engineer #43417

BJM:mjd
Enclosure

cc/enc: Mr. Gordon J. Louttit, Esq., Whittaker Corporation
Mr. Glen AbdunNur, Bermite Facility
Mr. Robert P. Ghirelli, Los Angeles Regional Water Quality Control Board
Mr. Jose Ochoa, Los Angeles County Fire Department
Hazardous Waste Management Division, U.S. Environmental Protection Agency, Region IX

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**WHITTAKER CORPORATION, BERMITE FACILITY
22116 WEST SOLEDAD CANYON ROAD
SANTA CLARITA, CALIFORNIA 91350**

1.0 INTRODUCTION

The Whittaker Corporation (Whittaker), Bermite facility (site) is located at 22116 West Soledad Canyon Road in Santa Clarita, California (Figure 1). At the time operations were terminated in April 1987, Whittaker had interim status permits for 14 Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Units (HWMUs) at the site. A document entitled "Whittaker Corporation, Bermite Division, Santa Clarita, California, CAD064573108, Facility Closure Plan Modifications" (Closure Plan), was prepared by Whittaker and approved by the California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA) and U.S. Environmental Protection Agency (EPA) on December 28, 1987. Outlined in the Closure Plan are procedures for obtaining approval by Cal-EPA and EPA of clean closure certification for the different HWMUs, including the 317 Surface Impoundment (Area 317).

Required in the Closure Plan is the implementation of a ground water monitoring system at Area 317 capable of detecting and assessing the impact of the HWMU on the uppermost aquifer at the site. Implementation of a ground water monitoring system is described in the document entitled "Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment," dated October 9, 1992 (Area 317 Monitoring Plan). This is a revised response plan approved by Cal-EPA which meets the requirements of the revisions to Title 22 and expands the constituents sampled and reported. The revised Area 317 Monitoring Plan has been utilized for the nineteenth and subsequent sampling events.

A total of six ground water monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, and MW-10) have been installed around Area 317 (Figure 2). Reports detailing the location and construction of monitoring wells, sampling and analysis plans for collecting and analyzing ground water samples from the ground water monitoring wells, abandonment of monitoring well MW-4, and quarterly sampling results which have been submitted to Cal-EPA and EPA are listed in Appendix A of this report.

Quarterly ground water sampling activities were initiated on October 3, 1988, for monitoring wells MW-1, MW-3, and MW-4. The ground water monitoring program includes analyses of water samples for volatile organic compounds (VOCs). Laboratory analytical results from the third quarterly sampling event reported trichloroethene (TCE) at 4,800 micrograms per liter ($\mu\text{g/l}$) in the ground water sample collected from monitoring well MW-4. As a result of this detection of TCE in the sample from monitoring well MW-4, two additional monitoring wells were installed in Area 317 (MW-5 and MW-6).

The fourth quarterly monitoring event included sampling of the ground water from monitoring wells MW-1, MW-3, and MW-4. Monitoring wells MW-5 and MW-6 were not equipped for sampling during the fourth quarterly sampling event. Analytical results from the fourth quarter were similar to those reported in the third quarterly sampling event. The concentrations of VOCs reported in samples collected from monitoring wells MW-1 and MW-3 were below laboratory reporting limits; however, analysis of the ground water sample collected from monitoring well MW-4 reported TCE at 7,200 $\mu\text{g/l}$. Analysis of ground water samples collected from monitoring well MW-4 during the fifth through twelfth quarterly sampling events reported a steady decline in TCE concentration. Based on the results of the initial four sampling events, a reduced list of chemical parameters, approved by Cal-EPA, was utilized for the fifth through eighteenth quarterly sampling events.

Statistical analysis of indicator parameters was also initiated during the fifth quarterly sampling event. The ground water samples collected and analyzed for indicator parameters from monitoring wells MW-1, MW-3, and MW-4 for the initial year of monitoring were evaluated to assess whether statistically significant changes to the ground water had occurred as a result of site activities.

A Comprehensive Ground Water Monitoring Evaluation (CME) was conducted by Cal-EPA on January 24 and 25, 1990, during the sixth quarterly monitoring event. Personnel from Cal-EPA were present during all phases of the sixth quarterly monitoring event, from the taking of initial potentiometric surface elevation measurements to the sealing of the coolers containing the quarterly ground water samples.

Ground water samples from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10 were collected on March 29, 1995. The results of the twenty-sixth quarterly ground water sampling event are presented in this report, along with recommendations for future quarterly ground water sampling events.

2.0 GROUND WATER LEVEL MEASUREMENTS

Water level measurements were collected on March 27, 1995 prior to well evacuation and sampling activities. Monitoring well locations with respect to Area 317 are shown on Figure 2. Water levels were measured to the nearest 0.01 foot. Water level elevations have decreased 48.27, 48.06, 33.22, and 33.87 feet in monitoring wells MW-1, MW-3, MW-5, and MW-6, respectively, since the initiation of RCRA ground water monitoring activities at Area 317. The water level elevation has increased 9.32 feet in monitoring well MW-10 since installation. Water level elevations increased 4.92, 4.66, 5.80, 5.73 and 5.39 feet in monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, between the twenty-fifth and twenty-sixth quarters. Table 1 summarizes potentiometric surface elevation data for monitoring wells in Area 317. Figure 3 graphically illustrates the changes in potentiometric surface elevations in monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10 over time.

The level measurements on March 27, 1995, were utilized to develop the map of potentiometric surface contours illustrated on Figure 2. Figure 2 indicates the inferred flow direction for March 27, 1995, is toward the north-northeast. Based upon this data, monitoring well MW-6 is estimated to be located hydraulically downgradient from Area 317, monitoring wells MW-1, MW-5, and MW-10 are estimated to be located hydraulically crossgradient from Area 317, and monitoring well MW-3 is estimated to be located hydraulically upgradient from Area 317. The ground water flow direction estimated for March 27, 1995, is similar to the flow direction estimated for the previous sampling event. The estimated ground water flow direction has varied from north-northwest to north-northeast since initiating quarterly ground water monitoring, possibly representing a contributory factor to the reported variability in ground water chemistry.

3.0 SAMPLE COLLECTION AND ANALYSES

Ground water evacuation, stabilization, and sampling procedures are outlined in Appendix B.

3.1 Required Ground Water Analyses

For the twenty-sixth sampling event, the following analytical parameters were tested according to the Area 317 Monitoring Plan:

- Ground Water Monitoring Parameters: pH, specific conductance, TOC, TOX, TCE, sulfate, sodium, manganese, iron, and chloride.

Background water quality parameters were not analyzed in the twenty-sixth sampling event based upon the results from previous sampling events.

All ground water samples collected during the twenty-sixth sampling event were submitted to FGL Environmental (FGL) in Santa Paula, California. FGL is certified by Cal-EPA to perform the ground water analyses outlined in the Closure Plan. Chain-of-custody and sample analyses request forms are included in Appendices C and D, respectively.

A description of FGL's Quality Assurance/Quality Control (QA/QC) program is provided in Appendix E. Copies of the laboratory analytical reports for all trip, field, and method blanks, and duplicate and spiked samples analyzed by FGL are provided in Appendix F.

3.2 Approved Analytical Methods

Ground water monitoring parameters were analyzed by EPA or other approved methodologies. Analytical methodologies were presented in the "Ground Water Sampling and Analysis Plan," dated August 1988. Modifications to this plan were approved by Cal-EPA prior to the fifth quarterly sampling event. Copies of the laboratory test method protocol were included in Appendix B of "Quarterly Sampling Report No. 1," dated December 1988.

A summary of sample volumes, sample containers, and laboratory analytical methods utilized during the twenty-sixth sampling event is presented in Table B-3, Appendix B. Procedures regarding sample containers, sample labeling, sample collection, and field QA/QC are outlined in Appendix B.

4.0 GROUND WATER SAMPLE ANALYTICAL RESULTS

4.1 Ground Water Monitoring Parameters

Ground water samples from each monitoring well were analyzed for pH, specific conductance, chloride, iron, manganese, sodium, sulfate, TCE, TOC, and TOX to serve as ground water monitoring parameters. Table 2 summarizes the results of the ground water monitoring parameter analyses. Copies of the original laboratory data sheets are presented in Appendix G.

Laboratory pH measurements of 7.5, 7.7, 7.7, 7.8, and 7.9 were recorded for samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-sixth monitoring event. The laboratory pH measurements recorded for samples collected from the monitoring wells during the twenty-sixth sampling event were generally consistent with the measurements recorded during previous sampling events.

Specific conductance measurements of 770, 620, 540, 580, and 610 micromhos per centimeter squared ($\mu\text{mhos}/\text{cm}^2$) were recorded for samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-sixth sampling event. The specific conductance measurements recorded during the twenty-sixth sampling event are generally consistent with measurements recorded during previous sampling events.

The results for chloride, sodium, and sulfate were 160, 49, and 12 milligrams per liter (mg/l) for the sample from monitoring well MW-1; 28, 49, and 71 mg/l for the sample from monitoring well MW-3; 40, 51, and 32 mg/l for the sample from monitoring well MW-5; 62, 51, and 30 mg/l for the sample from monitoring well MW-6; and 62, 77, and 37 mg/l for the sample from monitoring well MW-10. Laboratory results for iron were 60, <50, 70, 110, and 70 $\mu\text{g}/\text{l}$ for the ground water samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-sixth sampling event. The results for iron, sodium, chloride, and sulfate are generally consistent with results from previous sampling events.

The concentration of manganese in samples collected on March 29, 1995 ranged from 0.8 $\mu\text{g}/\text{l}$ in the sample collected from monitoring well MW-3 to 1.6 $\mu\text{g}/\text{l}$ in the sample collected from well MW-1. For reporting purposes, the detection limit for manganese for the present monitoring event was 0.5 $\mu\text{g}/\text{l}$. Prior to the twenty-sixth monitoring event, the detection limit for manganese was 1 $\mu\text{g}/\text{l}$.

TCE was reported at less than the 0.5 $\mu\text{g}/\text{l}$ detection limit in samples from all five monitoring wells. These results for TCE from ground water samples from Area 317 monitoring wells are consistent with the previous sampling event.

TOC was reported at less than the 0.5 mg/l detection limit in all samples collected from Area 317 monitoring wells during the twenty-sixth sampling event. The TOC measurements recorded during the twenty-sixth sampling event are generally consistent with measurements recorded during previous sampling events.

The concentration of TOX samples collected on March 29, 1995 ranged from less than the 5 $\mu\text{g}/\text{l}$ detection limit in the sample collected from monitoring well MW-1 to 8 $\mu\text{g}/\text{l}$ in the sample collected from well MW-10. The TOX measurements recorded during the twenty-sixth sampling event are generally consistent with measurements recorded during previous sampling events.

Copies of the laboratory analytical reports for the ground water monitoring parameters are included in Appendix G.

4.2 Background Water Quality Parameters

Background water quality parameters were not tested during the present monitoring event. The background water quality parameters were last tested during the twenty-third monitoring event because of a third consecutive exceedance with respect to the tolerance limit established for sodium. A summary of historical background water quality parameters is presented in Table 3.

5.0 STATISTICAL ANALYSIS OF RESULTS TO DATE

As was indicated in the document entitled "Ground Water Sampling and Analysis Plan," dated August 1988, and required in 40 CFR Part 265.92, statistical analysis of the indicator parameters was previously performed to determine whether a statistically significant difference in the water quality existed between the individual downgradient monitoring wells and the upgradient or background monitoring wells. At that time, monitoring wells MW-1 and MW-3 were considered upgradient or crossgradient relative to Area 317, and monitoring wells MW-5, MW-6, and MW-10 were considered downgradient or crossgradient relative to Area 317.

After four quarters of sampling and analysis of the monitoring system, the mean, standard deviation, variance, and coefficient of variance of the four indicator parameters were calculated. These values were reported to Cal-EPA in correspondence to Mr. Alan Sorsher, P.E., Cal-EPA, from Wenck Associates Inc. (Wenck), dated October 25, 1989. The statistical analysis, presented in the fifth through tenth quarterly sampling reports, indicated only one statistically significant difference in water quality as determined by the indicator parameters. This was interpreted by Wenck to be caused by erroneous TOC results from the sixth quarter.

Since the approval of the Area 317 Monitoring Plan by Cal-EPA, the statistical comparison of analytical results for each downgradient monitoring well is made against the tolerance limits calculated from upgradient monitoring well results for the ten ground water monitoring parameters (chloride, sulfate, iron, manganese, sodium, TCE, TOC, TOX, specific conductance, and pH). The tolerance limits for the ground water monitoring parameters will be updated at a minimum annually to include the latest analytical data.

Concentrations of the ground water monitoring parameters in the ground water samples collected from Area 317 monitoring wells for the twenty-sixth quarter are included in Table H-1, presented in Appendix H. A summary of the quarterly statistics for each background monitoring well and the tolerance limit calculations for the ground water monitoring parameters are presented in Appendix H, Tables H-2, H-3, and H-4. Graphical presentation of the statistical information is also included in Appendix H.

5.1 Assumptions Used in the Statistical Analysis

As recommended in the document entitled "RCRA Ground Water Monitoring Technical Enforcement Guidance Document," the data points that are less than the detection limit have been given a value equal to one-half the detection limit of the analyte. As recommended in the document entitled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities, Interim Final Guidance" (Guidance Document), the statistical analysis assumes a value for the confidence coefficient (1- α) of 0.95 and a value for the proportion (y) of 0.95. This translates to a 95 percent confidence that 95 percent of future background monitoring well results will fall within the tolerance interval predicted. The tolerance limits for pH were calculated using a two-tailed distribution, and the tolerance limits for the other parameters were calculated using a one-tailed distribution. It was assumed that the data are distributed normally.

5.2 Data Preparation

The ground water sample analytical results from the two background or upgradient monitoring wells (MW-1 and MW-3) for all twenty-six quarters of ground water sampling to date and the three downgradient monitoring wells (MW-5, MW-6, and MW-10) for the twenty-sixth quarter of ground water sampling have been tabulated and prepared for statistical analysis. In accordance with the tolerance limit methodology used for this statistical analysis, the analytical results for the ten ground water monitoring parameters are summarized by quarter and by monitoring well. Arithmetic mean and standard deviation summary statistics have been calculated from background monitoring well results and are utilized in calculating the tolerance limits for each of the ground water monitoring parameters.

The statistical analysis for the ground water monitoring parameters involves testing the ground water quality downgradient of Area 317 against the set of tolerance limits, i.e., that there are no excursions of the tolerance limits, which are based on the average of all the quarterly statistics for each of the ten ground water monitoring parameters for background monitoring wells MW-1 and MW-3, compared to the twenty-sixth quarter results for each of the downgradient monitoring wells MW-5, MW-6, and MW-10 (Table H-1).

The calculations of the quarterly statistics were performed in the same manner as was outlined in the Area 317 Monitoring Plan. The values of K were taken from the statistical tables based on the number of samples and a one-sided tolerance limit. Note that pH values have not been reported as hydrogen ion concentrations as was done previously and that the value of K for the analysis of pH is derived from the tables for two-sided tolerance limits. TCE has never been reported above the detection limit in samples from monitoring wells MW-1 and MW-3; therefore, the tolerance limit for TCE is set at the detection limit.

5.3 Results

The twenty-sixth quarter results for each ground water monitoring parameter at each downgradient monitoring well were compared to the tolerance limits based on the first through twenty-sixth quarter results for background monitoring wells MW-1 and MW-3. The statistical analysis indicates that there is no excursion of tolerance limits of pH, specific conductance, chloride, sulfate, iron, manganese, sodium, TCE, TOC, or TOX in downgradient ground water quality, except for sodium in the sample from monitoring well MW-10. In the past, an elevated sodium concentration in monitoring well MW-10 relative to sodium concentrations in the other four Area 317 wells has not indicated a statistical impact to ground water quality, based on the concentrations of the other ground water monitoring parameters and retesting of background water quality parameters.

6.0 SUMMARY

6.1 Ground Water Level Measurements

Based upon the March 27, 1995 data, the estimated direction of ground water flow is toward the north-northeast, which is consistent with the ground water flow direction estimated during the previous sampling event. Utilizing this data, monitoring well MW-6 is estimated to be located hydraulically downgradient from Area 317; monitoring wells MW-1, MW-5, and MW-10 are estimated to be located hydraulically crossgradient from Area 317; and monitoring well MW-3 is estimated to be located hydraulically upgradient from Area 317.

6.2 Ground Water Monitoring Parameters

The pH reported in samples from the five monitoring wells ranged from 7.5 (monitoring well MW-1) to 7.9 (monitoring well MW-10). The specific conductance in samples from the five monitoring wells ranged from 540 $\mu\text{mhos}/\text{cm}^2$ (monitoring well MW-5) to 770 $\mu\text{mhos}/\text{cm}^2$ (monitoring well MW-1). TOC was reported at less than 0.5 mg/l in samples from all five monitoring wells. TOX in samples from the five monitoring wells ranged from less than 5 $\mu\text{g}/\text{l}$ (monitoring well MW-1) to 8 $\mu\text{g}/\text{l}$ (monitoring well MW-10). The pH, specific conductance, TOC, and TOX results reported for the twenty-sixth sampling event are generally consistent with the results reported for the previous sampling events.

The constituent of concern for Area 317 is TCE, which was reported as less than the detection limit in samples from all five monitoring wells. This result is consistent with the previous sampling event.

The ground water sample analytical results for chloride, iron, manganese, sodium, and sulfates from the five monitoring wells are generally consistent with the existing data. All are under the tolerance limits, except for sodium in the sample from monitoring well MW-10.

6.3 Background Water Quality Parameters

Background water quality parameters were not tested in this quarter. If tolerance limits for any water quality parameters are exceeded for three consecutive monitoring events, then additional samples will be collected during the subsequent monitoring event and analyzed for the background water quality parameters. The tolerance limit for sodium was exceeded for the third consecutive quarter in the sample from monitoring well MW-10, but Acton • Mickelson • Environmental, Inc. (AME), proposes that no further background water quality parameters be tested due to this exceedance at this time. The elevated sodium concentrations in the sample from monitoring well MW-10 relative to sodium concentrations in samples from the Area 317 background wells has not indicated an impact with respect to the other ground water quality parameter concentrations. During the twenty-third monitoring event, all six background parameters were analyzed due to the exceedance of the tolerance limit for sodium in the sample from monitoring well MW-10. Analysis of the data indicated that the concentrations of background water quality parameters were consistent with the historical data for these parameters in samples from upgradient wells MW-1 and MW-3.

6.4 Statistical Analysis

The analytical results from the twenty-sixth quarter sampling event indicate that values for pH, specific conductance, chloride, sulfate, iron, manganese, sodium (monitoring wells MW-5 and MW-6) TCE, TOC, and TOX in the downgradient monitoring wells are within the tolerance limits set by calculations using historical results from the background monitoring wells. The tolerance limit for sodium was exceeded for the sample from monitoring well MW-10.

7.0 RECOMMENDATIONS

Based upon the data collected, current regulatory guidelines, and the professional judgment of AME, the following recommendations are presented:

- Conduct future sampling events in accordance with the procedures set forth in the document entitled "Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment," dated October 9, 1992.
- Update the tolerance limits for the ground water monitoring parameters following the twenty-seventh quarterly sampling event.

8.0 REMARKS

The recommendations contained in this report represent our professional opinions. These opinions are based on currently available information and were developed in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TABLE 1
POTENTIOMETRIC SURFACE ELEVATIONS
RCRA GROUND WATER MONITORING WELLS
WHITTAKER CORPORATION, BERMITE FACILITY

Well No.	MW-1	MW-3	MW-4	MW-5	MW-6	MW-10
Top of Casing Elevation ^a	1,561.32	1,538.51	1,538.43	1,493.37	1,521.09	1,537.49
Date	Potentiometric Surface Elevations ^a					
12/23/87	1,107.81	-- ^b				
01/27/88	1,108.03	1,109.51				
02/03/88	1,108.32	1,109.88				
02/04/88	1,108.36	1,109.14				
02/05/88	1,108.36	1,109.17				
02/09/88	1,108.24	1,109.13				
02/10/88	1,108.28	1,109.27				
02/12/88	1,108.28	1,109.27				
02/19/88	1,108.11	1,108.86				
03/28/88	1,107.69	1,108.23				
04/05/88	1,107.76	1,108.23				
04/12/88	1,107.66	1,108.23				
04/19/88	1,107.56	1,108.23				
04/26/88	1,107.61	1,108.23				
05/02/88	1,107.86	1,108.23				
07/27/88	1,103.58	1,104.19	1,102.61			
10/03/88	1,101.75	1,102.11	1,100.77			
01/23/89	1,099.82	1,100.25	1,098.92			
04/17/89	1,097.37	1,097.62	1,096.05			
07/27/89	1,094.67	1,094.85	1,093.53	1,093.02	1,093.15	
08/10/89	1,093.93	1,094.09	1,092.89	1,092.32	1,092.49	
08/18/89	1,093.62	1,093.76	1,092.64	1,092.03	1,092.19	
10/30/89	1,092.07	1,092.16	1,091.08	1,090.62	1,090.64	
01/24/90	1,090.56	1,090.54	1,089.68	1,089.17	1,089.50	
04/16/90	1,088.66	1,088.78	1,087.83	1,087.23	1,087.32	
07/16/90	1,083.56	1,083.53	1,082.29	1,081.41	1,081.85	
10/17/90	1,079.91	1,079.78	1,078.86	1,078.25	1,078.56	
01/28/91	1,076.52	1,076.54	1,075.46	1,074.64	1,074.91	
04/22/91	1,071.22	1,071.29	1,069.75	1,068.90	1,069.25	
07/17/91	1,063.63	1,063.79	1,061.66	1,060.53	1,061.14	
10/08/91	1,055.22	1,055.41	1,053.28	1,052.12	1,052.69	
01/29/92	1,051.88	1,052.29	1,050.63	1,049.76	1,050.06	1,050.57
04/20/92	1,050.47	1,050.88	1,049.33	1,048.78	1,048.92	1,049.37
07/28/92	1,046.84	1,047.40	-- ^c	1,045.14	1,045.20	1,045.77
10/19/92	1,043.87	1,044.58	-- ^c	1,042.05	1,042.13	1,042.77
01/25/93	1,044.79	1,045.61	-- ^c	1,044.22	1,043.64	1,044.29
06/07/93	1,049.24	1,050.36	-- ^c	1,049.19	1,048.70	1,049.21
09/20/93	1,052.40	1,054.11	-- ^c	1,052.47	1,051.79	1,052.53
12/06/93	1,054.26	1,056.27	-- ^c	1,054.29	1,053.58	1,054.53
03/07/94	1,057.58	1,059.63	-- ^c	1,057.69	1,056.92	1,057.77
06/21/94	1,056.22	1,058.38	-- ^c	1,055.41	1,054.93	1,055.86
09/13/94	1,053.94	1,056.25	-- ^c	1,052.79	1,052.44	1,053.43
12/12/94	1,054.62	1,056.79	-- ^c	1,054.00	1,053.55	1,054.50
03/27/95	1,059.54	1,061.45	-- ^c	1,059.80	1,059.28	1,059.89

^aNGVD = National Geodetic Vertical Datum.

^bMeasurement not recorded.

^cMonitoring well abandoned 05/28/92.

TABLE 2
GROUND WATER MONITORING PARAMETER ANALYSES
FOR SAMPLES COLLECTED MARCH 29, 1995

Parameter	Units	Detection Limit	Monitoring Well No.				
			MW-1	MW-3	MW-5	MW-6	MW-10
pH			7.5	7.7	7.7	7.8	7.9
Specific Conductance	$\mu\text{mhos}/\text{cm}^2$	1	770	620	540	580	610
Chloride	mg/l	2	160	28	40	62	62
Iron	$\mu\text{g}/\text{l}$	50	60	< 50	70	110	70
Manganese	$\mu\text{g}/\text{l}$	0.5	1.6	0.8	1.3	1.3	1.2
Sodium	mg/l	1	49	49	51	51	77
Sulfate	mg/l	2	12	71	32	30	37
TCE ^a	$\mu\text{g}/\text{l}$	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TOC ^b	mg/l	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TOX ^c	$\mu\text{g}/\text{l}$	5	< 5	7	6	7	8

^aTCE = Trichloroethene.

^bTOC = Total Organic Carbon.

^cTOX = Total Organic Halogens.

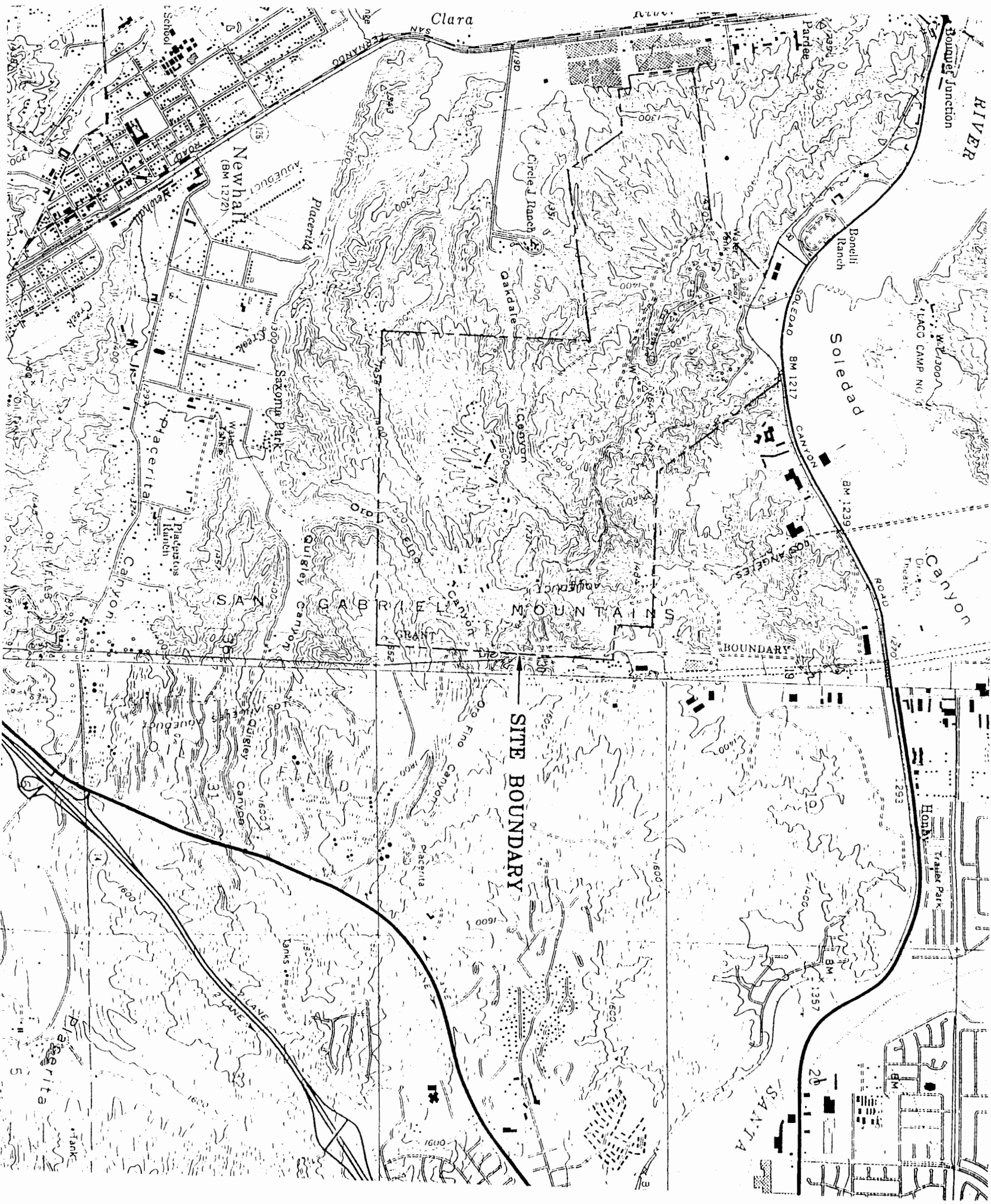
TABLE 3
BACKGROUND WATER QUALITY PARAMETERS

Well No.	Date Sampled	Gross Alpha (pCi/l)	Gross Beta (pCi/l)	Lead (mg/l)	Fluoride (mg/l)	Nitrate (mg/l)	Turbidity (NTUs)
Detection Limits				-0.01 ^a 0.0002	0.1	0.4	0.2
MW-1	10/04/88	0.4 ± 2	0.7 ± 2	<0.01	-- ^b	--	--
	01/27/93	0 ± 1	4 ± 2	<0.01	0.2	--	--
	06/09/93	0.4 ± 1	0.7 ± 2	<0.01	0.2	3.9	0.4
	07/14/93	2 ± 2	0 ± 2	<0.01	0.4	4.8	0.9
	08/11/93	1 ± 1	4 ± 4	<0.01	0.3	4.8	0.9
	09/22/93	--	--	--	--	--	0.5
	03/10/94	--	--	--	--	ND	--
	06/22/94	2 ± 2	4 ± 2	<0.0002	0.2	3.6	1.0
MW-3	10/04/88	0.7 ± 1	2 ± 3	<0.01	--	--	--
	01/27/93	0.8 ± 1	2 ± 2	<0.01	0.3	--	--
	06/09/93	2 ± 1	1 ± 2	<0.01	0.2	1.6	<0.2
	07/14/93	2 ± 2	1 ± 2	<0.01	0.3	2.1	<0.2
	08/11/93	4 ± 2	3 ± 4	<0.01	0.2	2.2	0.3
	09/22/93	--	--	--	--	--	<0.2
	03/10/94	--	--	--	--	1.4	--
	06/22/94	1.0 ± 1	2 ± 2	4.9	0.2	3.6	0.3
MW-5 ^c	06/22/94	1.0 ± 1	3 ± 2	<0.0002	0.2	3.6	0.9
MW-6 ^c	06/22/94	0.1 ± 1	2 ± 2	<0.0002	0.2	3.8	0.8
MW-10 ^c	06/22/94	0.4 ± 1	4 ± 2	<0.0002	0.2	3.7	0.8

^aDetection limit lowered from 0.01 to 0.0002 mg/l on 6/22/94.

^bSample was not taken.

^cSamples collected from monitoring wells MW-5, MW-6, and MW-7 during the twenty-third sampling event were analyzed for the background water quality parameters because of a repeated tolerance interval exceedence for sodium during previous sampling events.



EXPLANATION:
— APPROXIMATE SITE
- - - LOCATION BOUNDARY

General Notes
Base Map from U.S.G.S.
MINT CANYON, AND NEWHALL CALIFORNIA
7.5 Minute Topographic
Quadrangle
Photorevised 1988

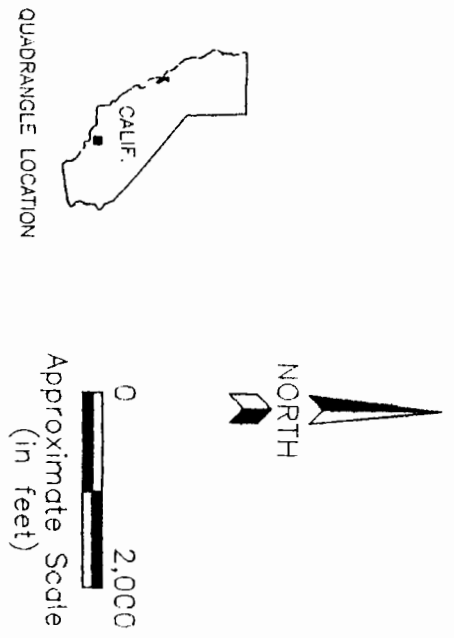
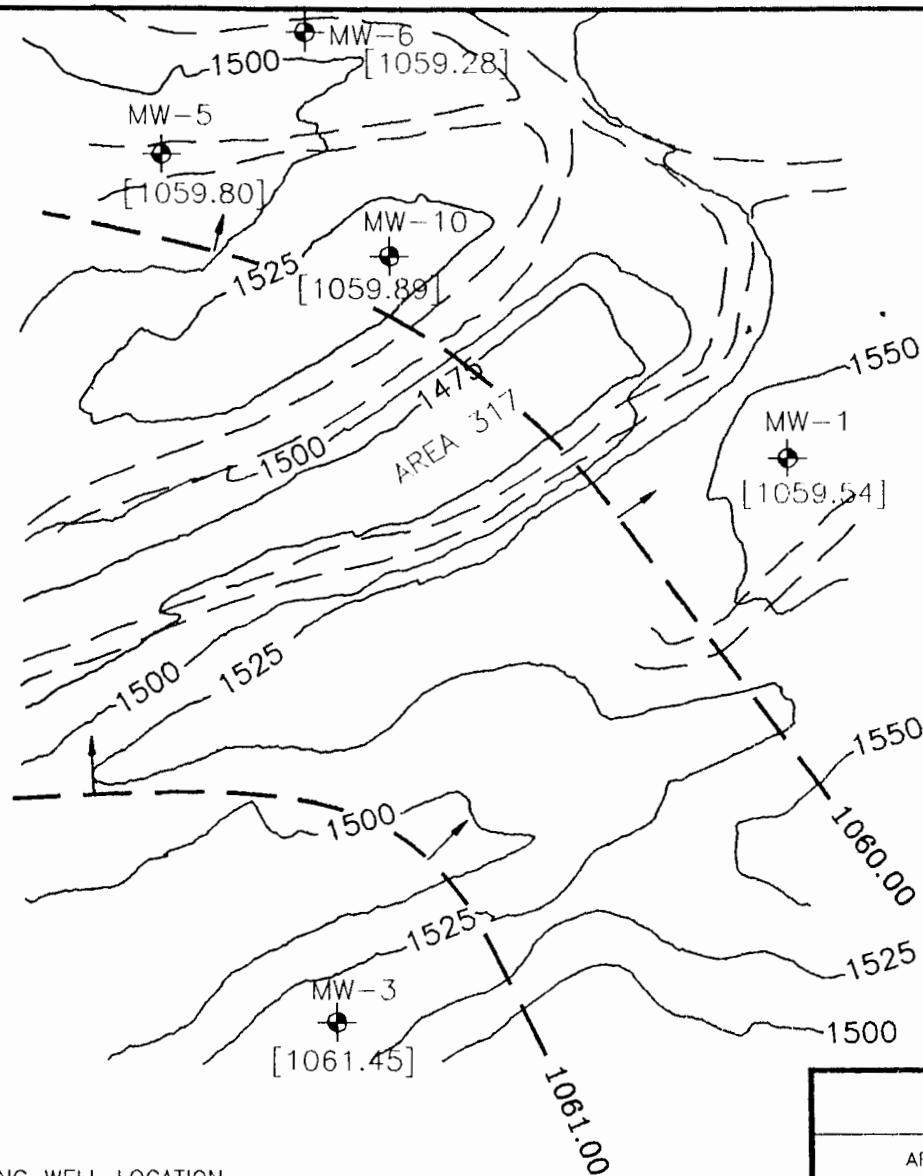


FIGURE 1-1 SITE LOCATION MAP			WHITTAKER CORPORATION, BERMATE FACILITY 22116 WEST SOLEDAD CANYON ROAD SANTA CLARITA, CALIFORNIA	
Project No.	21001	Drawn	CCB	Action • Mickelson • Environmental, Inc. Consulting Scientists, Engineers, and Geologists
File No.	SD101SLM	Prepared	PHB	4511 Golden Foothill Parkway, #1 El Dorado Hills, California 95762
Revision	0	Reviewed		(916) 939-7550



0 200
Approximate Scale
(in feet)

LEGEND

⊕ MW-1 MONITORING WELL LOCATION

[1061.45] GROUND WATER ELEVATION IN FEET
RELATIVE TO MEAN SEA LEVEL

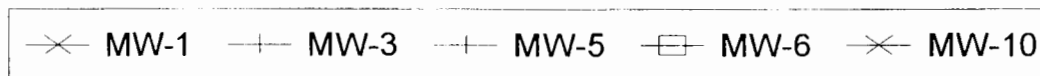
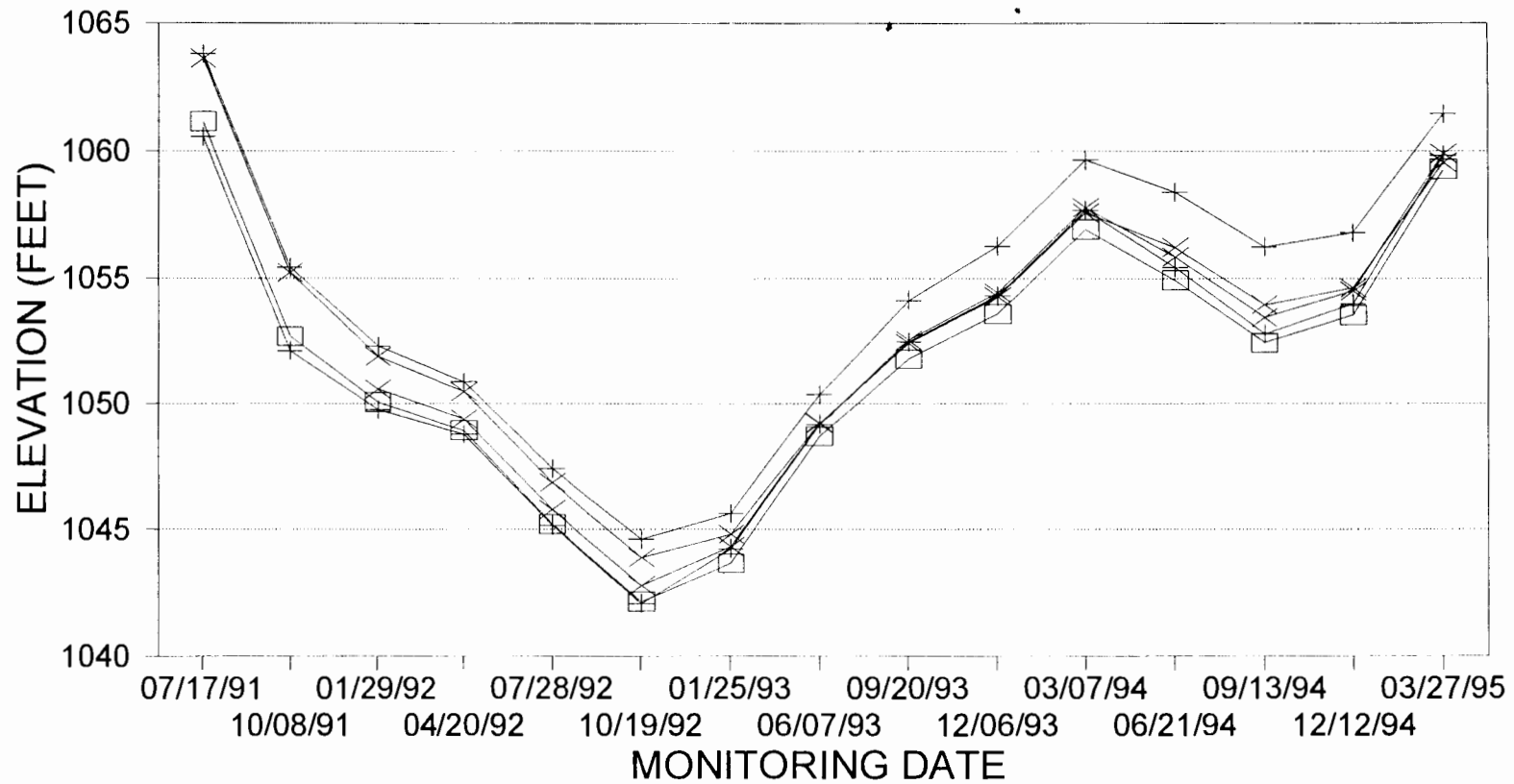
1060.00 — ESTIMATED GROUND WATER CONTOUR IN FEET
RELATIVE TO MEAN SEA LEVEL WITH ARROW
INDICATING INFERRED DIRECTION OF GROUND
WATER FLOW

FIGURE 2

AREA 317 GROUND WATER MONITORING WELL LOCATIONS
AND ESTIMATED GROUND WATER FLOW DIRECTION (03-27-95)
WHITTAKER CORPORATION, BERMITE FACILITY
22116 WEST SOLEDAD CANYON ROAD, SANTA CLARITA, CALIFORNIA

Project No. 21001.53	Drawn CCB	Acton • Mickelson • Environmental, Inc. Consulting Scientists, Engineers, and Geologists 4511 Golden Foothill Parkway, #1 El Dorado Hills, California 95762 (916) 939-7550
File No. QM35WTC2	Prepared LGP	
Revision 24	Reviewed	

FIGURE 3
RCRA GROUND WATER MONITORING WELLS
POTENTIOMETRIC SURFACE ELEVATIONS



APPENDIX A

DOCUMENT SUBMITTAL CHRONOLOGY

APPENDIX A

DOCUMENT SUBMITTAL CHRONOLOGY

The following documents have been submitted to Cal-EPA and U.S. EPA, Region IX, in fulfillment of the Closure Plan regarding ground water monitoring at Areas 317 and 342:

- Whittaker Corporation, Bermite Division, Santa Clarita, CA CAD064573108, Facility Closure Plan Modifications, April 1987.
- Revised Ground Water Monitoring Plan for the 317/342 Area, October 8, 1987.
- Proposed Interim Status Ground Water Monitoring Sampling and Analysis Program, December 1987.
- Documentation Report--Construction and Development of Wells for Ground Water Monitoring of the 342 and 317 Areas, February 1988.
- Verification Sampling Results at Selected RCRA Units, March 1988.
- RCRA Ground Water Monitoring System--Proposed Final Configuration, May 1988.
- Ground Water Sampling and Analysis Plan, August 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 1, December 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 2, March 1989.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 3, July 1989.
- Specific Plan for a Ground Water Quality Assessment Program, June 1989.
- Interim Response Action Plan, 317 Area Soil and Ground Water Remediation, June 1989.
- Site Ground Water Sampling and Analysis Plan, Appendix IV of 40 CFR 264.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 4, September 1989.
- Statistical Analysis--Well MW-2 Versus MW-1 and MW-3, October 1989.

- RCRA Ground Water Sampling, Quarterly Sampling Report No. 5, March 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 6, May 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 7, June 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 8, October 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 9, January 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 10, April 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 11, July 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 12, October 1991.
- Specific Plan for a Ground Water Quality Assessment Program for the 317 Surface Impoundment Area.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 13, January 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 14 and Report of Monitoring Well MW-10 Installation, January through March 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 15, April through June 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 16, July through September 1992.
- Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment, October 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 17, October through December 1992.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 18, January through March 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 19, April through June 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 20, July through September 1993.

- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 21, October through December 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 22, January through March 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 23, April through June 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 24, June through September 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 25, October through December 1994.

APPENDIX B

GROUND WATER SAMPLING PROCEDURES

TABLE B-1

AREA 317 WELL EVACUATION
BERMITE DIVISION, WHITTAKER CORPORATION

Well Number	Date Pump Started	Evacuation	Sampling ^a	Time and Date of Sample Collection
		Approximate Duration of Pumping (hours)	Duration of Pumping (minutes)	
MW-1	03/28/95	27.75	20.00	1115(03/29/95)
MW-3	03/28/95	28.25	20.00	1145(03/29/95)
MW-5	03/28/95	26.50	25.00	1010(03/29/95)
MW-6	03/28/95	26.00	25.00	0930(03/29/95)
MW-10	03/28/95	27.25	20.00	1045(03/29/95)

^aFlow rate from wells was reduced prior to sampling. Actual sample extraction flow rate for all wells approximately 100 milliliter/minute in a 1/4-inch pipe.

TABLE B-2

WELL STABILIZATION TESTS
BERMITE DIVISION, WHITTAKER CORPORATION

Well	Turbidity (NTUs) ^a	Temperature (°C.)	pH	Specific Conductance (μ mhos) ^b /cm ²	Time and Date
MW-1	15.37	23.2	7.81	755	1120 (03/28/95)
	2.95	22.7	7.81	774	1520 (03/28/95)
	1.62	22.2	7.69	763	0850 (03/29/95)
MW-3	8.02	23.7	7.68	584	1125 (03/28/95)
	2.26	23.8	7.82	602	1525 (03/28/95)
	1.46	23.5	7.65	607	0855 (03/29/95)
MW-5	4.71	23.1	7.75	540	1110 (03/28/95)
	4.05	23.1	8.00	542	1510 (03/28/95)
	1.89	22.7	7.73	537	0840 (03/29/95)
MW-6	11.25	23.1	7.55	581	1105 (03/28/95)
	5.62	23.4	7.95	570	1505 (03/28/95)
	2.86	22.9	7.70	572	0835 (03/29/95)
MW-10	5.98	23.1	7.40	609	1115 (03/28/95)
	4.24	23.2	7.88	602	1515 (03/28/95)
	2.26	23.3	7.94	599	0845 (03/29/95)

^aNTUs - nephelometric turbidity units.

^b μ mhos - micromhos.

TABLE B-3

LABORATORY ANALYTICAL METHODS AND SAMPLE VOLUME
AND CONTAINER REQUIREMENTS
AREA 317 GROUND WATER MONITORING WELLS
WHITTAKER CORPORATION, BERMITE DIVISION

Constituent	Analytical Method	Sample Volume (milliliters)	Container Type
Ground Water Monitoring Parameters			
pH	EPA 150.1	50	Plastic/glass
Specific Conductance	EPA 120.1	100	Plastic
Total Organic Carbon	EPA 415.1	250	Amber glass-TFE
Total Organic Halogen	EPA 9020	250	cap
Trichloroethylene	EPA 601	3 x 40	Amber glass-TFE
Sulfate	EPA 300.0	200	cap
Sodium	EPA 200.7	200	Amber glass-TFE
Iron	EPA 200.7	200	cap
Manganese	EPA 200.7	200	Plastic/glass
Chloride	EPA 300.0	100	Plastic
			Plastic
			Plastic
			Plastic/glass

TABLE B-4

AREA 317

KEY TO ANALYSIS DESIGNATION LABELS ON SAMPLE CONTAINERS
BERMITE DIVISION, WHITTAKER CORPORATION

Analysis Designation	Parameter(s) to be Analyzed
A	pH Specific Conductance (temperature corrected)
B	Total Organic Carbon (TOC)
C	Total Organic Halogen (TOX)
H	Sulfate, Chloride
O	Trichloroethene (TCE)
R	Sodium, Iron, Manganese

Each sample container was labeled with a unique sample number. The form of each label was as follows:

Well I.D./Analysis Designation/Sample Event No.

Where:

Well I.D. = MW-1, MW-3, MW-4, MW-5, MW-6, or MW-10.

Analysis Designation = A through V according to above table.

Sample Event No. = 1 through present event number.

Certificate of Analysis

Bottle Type & QA Level: B Level 1
Wash-B Description: 40 mL Amber Vial

Lot No.: B4277010

VOLATILES QUALITY ASSURANCE

This Certificate verifies that this lot of bottles has been cleaned according to the EPA wash procedure set forth in the EPA Statement of Work "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers" and that this lot has been tested and found to comply with or be lower than the EPA specifications as set forth in the EPA Statement of Work "Superfund Analytical Methods For Low Concentration Water For Organics Analysis 6/91", (Document # OLC02.0).

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Chloromethane	< 1
Bromomethane	< 1
Vinyl chloride	< 1
Chloroethane	< 1
Methylene chloride	< 2
Acetone	< 5
Carbon disulfide	< 1
1,1-Dichloroethene	< 1
1,1-Dichloroethane	< 1
cis-1,2-Dichloroethene	< 1
trans-1,2-Dichloroethene	< 1
Chloroform	< 1
1,2-Dichloroethane	< 1
2-Butanone	< 5
Bromochloromethane	< 1
1,1,1-Trichloroethane	< 1
Carbon tetrachloride	< 1
Bromodichloromethane	< 1
1,2-Dichloropropane	< 1
cis-1,3-Dichloropropene	< 1

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Trichloroethene	< 1
Dibromochloromethane	< 1
1,1,2-Trichloroethane	< 1
Benzene	< 1
trans-1,3-Dichloropropene	< 1
Bromoform	< 1
4-Methyl-2-pentanone	< 5
2-Hexanone	< 5
Tetrachloroethene	< 1
1,1,2,2-Tetrachloroethane	< 1
1,2-Dibromoethane	< 1
Toluene	< 1
Chlorobenzene	< 1
Ethylbenzene	< 1
Styrene	< 1
Xylenes (total)	< 1
1,3-Dichlorobenzene	< 1
1,4-Dichlorobenzene	< 1
1,2-Dichlorobenzene	< 1
1,2-Dibromo-3-chloropropane	< 1

IF EPES CAN BE OF ANY FURTHER ASSISTANCE, PLEASE CALL (800) 331-7425 AND ASK FOR OUR TECHNICAL SERVICE DEPARTMENT.

Approved:

Jul. Shepherd



EAGLE EPICHER
ENVIRONMENTAL SERVICES

36 B. J. TUNNELL BLVD. • MIAMI, OKLAHOMA 74354 • (800) 331-7425

Certificate of Analysis

Bottle Type & QA Level: Level 1
Description: 250 mL Amber R.R. OTWS

Lot No.: 24031060
Date: 2-8-94

VOLATILES QUALITY ASSURANCE

This Certificate verifies that this lot of bottles has been cleaned according to the EPA wash procedure set forth in the EPA Statement of Work "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers" and that this lot has been tested and found to comply with or be lower than the EPA specifications as set forth in the EPA Statement of Work "Superfund Analytical Methods For Low Concentration Water For Organics Analysis 6/91", (Document # OLC02.0).

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Chloromethane	< 1
Bromomethane	< 1
Vinyl chloride	< 1
Chloroethane	< 1
Methylene chloride	< 2
Acetone	< 5
Carbon disulfide	< 1
1,1-Dichloroethene	< 1
1,1-Dichloroethane	< 1
cis-1,2-Dichloroethene	< 1
trans-1,2-Dichloroethene	< 1
Chloroform	< 1
1,2-Dichloroethane	< 1
2-Butanone	< 5
Bromochloromethane	< 1
1,1,1-Trichloroethane	< 1
Carbon tetrachloride	< 1
Bromodichloromethane	< 1
1,2-Dichloropropane	< 1
cis-1,3-Dichloropropene	< 1

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Trichloroethene	< 1
Dibromochloromethane	< 1
1,1,2-Trichloroethane	< 1
Benzene	< 1
trans-1,3-Dichloropropene	< 1
Bromoform	< 1
4-Methyl-2-pentanone	< 5
2-Hexanone	< 5
Tetrachloroethene	< 1
1,1,2,2-Tetrachloroethane	< 1
1,2-Dibromoethane	< 1
Toluene	< 1
Chlorobenzene	< 1
Ethylbenzene	< 1
Styrene	< 1
Xylenes (total)	< 1
1,3-Dichlorobenzene	< 1
1,4-Dichlorobenzene	< 1
1,2-Dichlorobenzene	< 1
1,2-Dibromo-3-chloropropane	< 1

IF EPES CAN BE OF ANY FURTHER ASSISTANCE, PLEASE CALL (800) 331-7425 AND ASK FOR OUR TECHNICAL SERVICE DEPARTMENT.

Approved:

Jul. Shepherd



EAGLE P P Picher
ENVIRONMENTAL SERVICES

36 B J TUNNELL BLVD • MIAMI, OKLAHOMA 74354 • (800) 331-7425

This is your Certificate of Analysis for I-CHEM SUPERFUND-ANALYZED™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specifications and Guidance for Contaminant-Free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE Sample Containers for use in the analysis of Metals

Analyte	Detection Limit (ug/L)	Analyte	Detection Limit (ug/L)	Analyte	Detection Limit (ug/L)
Aluminum	< 80	Cobalt	< 10	Selenium	< 2
Antimony	< 5	Copper	< 10	Silver	< 5
Arsenic	< 2	Iron	< 50	Sodium	< 5000
Barium	< 20	Lead	< 2	Sodium (HDPE)	< 100
Barium (Amber HDPE)	< 50	Magnesium	< 100	Thallium	< 5
Beryllium	< 0.5	Manganese	< 10	Vanadium	< 10
Cadmium	< 1	Mercury	< 0.2	Zinc	< 10
Calcium	< 500	Nickel	< 20	Zinc (Amber HDPE)	< 500
Calcium (HDPE)	< 100	Potassium	< 750		
Chromium	< 10	Potassium (HDPE)	< 100		

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles, Pesticides, and PCBs

Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)
Acenaphthene	< 5	Acenaphthylene	< 5	Anthracene	< 5
Benzo(a)anthracene	< 5	Benzo(a)pyrene	< 5	Benzo(b)fluoranthene	< 5
Benzo(k)fluoranthene	< 5	Benzo(g,h,i)perylene	< 5	Benzoic Acid	< 20
Benzyl Alcohol	< 5	4-Bromophenyl-phenylether	< 5	Butylbenzylphthalate	< 5
4-Chloroaniline	< 5	4-Chloro-3-methylphenol	< 5	bis-(2-Chloroethoxy)methane	< 5
bis-(2-Chloroethyl)ether	< 5	bis-(2-Chloroisopropyl)ether	< 5	2-Chloronaphthalene	< 5
2-Chlorophenol	< 5	4-Chlorophenyl-phenylether	< 5	Chrysene	< 5
Di-n-butylphthalate	< 5	Di-n-octylphthalate	< 5	Dibenzo(a,h)anthracene	< 5
Dibenzofuran	< 5	1,2-Dichlorobenzene	< 5	1,4-Dichlorobenzene	< 5
1,3-Dichlorobenzene	< 5	3,3'-Dichlorobenzidine	< 5	2,4-Dichlorophenol	< 5
Diethylphthalate	< 5	Dimethylphthalate	< 5	2,4-Dimethylphenol	< 5
4,6-Dinitro-2-methylphenol	< 20	2,4-Dinitrophenol	< 20	2,4-Dinitrotoluene	< 5
2,6-Dinitrotoluene	< 5	bis-(2-Ethylhexyl)phthalate	< 5	Fluoranthene	< 5
Fluorene	< 5	Hexachlorobenzene	< 5	Hexachlorobutadiene	< 5
Hexachlorocyclopentadiene	< 5	Hexachloroethane	< 5	Indeno(1,2,3-cd)pyrene	< 5
Isophorone	< 5	2-Methylnaphthalene	< 5	2-Methylphenol	< 5
4-Methylphenol	< 5	2-Nitroaniline	< 20	3-Nitroaniline	< 20
4-Nitroaniline	< 20	N-Nitroso-di-n-propylamine	< 5	N-Nitrosodimethylamine	< 5
N-Nitrosodiphenylamine	< 5	Naphthalene	< 5	Nitrobenzene	< 5
2-Nitrophenol	< 5	4-Nitrophenol	< 20	Pentachlorophenol	< 20
Phenanthrene	< 5	Phenol	< 5	Pyrene	< 5
1,2,4-Trichlorobenzene	< 5	2,4,5-Trichlorophenol	< 20	2,4,6-Trichlorophenol	< 5
Azobenzene	< 5	Carbazole	< 5	Aldrin	< 0.01
4,4'-DDD	< 0.02	Endosulfan II	< 0.02	Alpha-BHC	< 0.01
4,4'-DDE	< 0.02	Endosulfan Sulfate	< 0.02	Beta-BHC	< 0.01
4,4'-DDT	< 0.02	Endrin	< 0.02	Delta-BHC	< 0.01
Dieldrin	< 0.02	Endrin Aldehyde	< 0.02	Gamma-BHC	< 0.01
Endosulfan I	< 0.01	Heptachlor	< 0.01	Heptachlor Epoxide	< 0.01
Methoxychlor	< 0.10	Endrin Ketone	< 0.02	Alpha-Chlordane	< 0.01
Gamma-Chlordane	< 0.01	Toxaphene	< 0.30	Aroclor-1016	< 0.20
Aroclor-1221	< 0.20	Aroclor-1232	< 0.20	Aroclor-1242	< 0.20
Aroclor-1248	< 0.20	Aroclor-1254	< 0.20	Aroclor-1260	< 0.20
Aroclor-1262	< 0.20	Aroclor-1268	< 0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatile Organics

Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)
Acetone	< 5	1,3-Dichloropropane	< 1	Benzene	< 1
2,2-Dichloropropane	< 1	Bromobenzene	< 1	1,2-Dichloropropane	< 1
Bromodichloromethane	< 1	trans-1,3-Dichloropropene	< 1	Bromoform	< 1
cis-1,3-Dichloropropene	< 1	Bromomethane	< 1	1,1-Dichloropropene	< 1
2-Butanone	< 5	Ethylbenzene	< 1	tert-Butylbenzene	< 1
Hexachlorobutadiene	< 1	sec-Butylbenzene	< 1	2-Hexanone	< 5
n-Butylbenzene	< 1	Isopropylbenzene	< 1	Carbon Disulfide	< 1
p-Isopropyltoluene	< 1	Carbon Tetrachloride	< 1	4-Methyl-2-pentanone	< 5
Chlorobenzene	< 1	Methylene Chloride	< 2	Chloroethane	< 1
Naphthalene	< 1	Chloroform	< 1	n-Propylbenzene	< 1
Chloromethane	< 1	Styrene	< 1	2 & 4 Chlorotoluene	< 1
1,1,2,2-Tetrachloroethane	< 1	1,2-Dibromo-3-chloropropane	< 1	Tetrachloroethene	< 1
Dibromochloromethane	< 1	Toluene	< 1	1,2-Dibromoethane (EDB)	< 1
1,2,3-Trichlorobenzene	< 1	Dibromomethane	< 1	1,2,4-Trichlorobenzene	< 1
1,4-Dichlorobenzene	< 1	1,1,2-Trichloroethane	< 1	1,3-Dichlorobenzene	< 1
1,1,1-Trichloroethane	< 1	1,2-Dichlorobenzene	< 1	Trichloroethene	< 1
Dichlorodifluoromethane	< 1	Trichlorofluoromethane	< 1	1,2-Dichloroethane	< 1
1,2,3-Trichloropropane	< 1	1,1-Dichloroethane	< 1		
trans-1,2-Dichloroethene	< 1	1,3,5-Trimethylbenzene	< 1		
nyl Acetate	< 5	1,1-Dichloroethene	< 1		
enes (total)	< 1	1,2,4-Trimethylbenzene	< 1		
l Chloride	< 1	cis-1,2-Dichloroethene	< 1		

keep this certificate for your records and to facilitate any necessary correspondence.
Additional information is required, contact our Technical Service Department at
3-1689 or (800) 262-5006 inside California.

E. Benson
Quality Assurance Manager

Production Number 4355013

Item Number 313-1000

Item Description: BOTTLE, NAT HDPE CYLINDER ROUND
Group 1 is applicable

This is your Certificate of Analysis for I-CHEM Certified™ 300 Series product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specifications and Guidance for Contaminant-Free Sample Containers" for use in Superfund and other hazardous waste programs.

Group 1. Glass and HDPE Sample Containers for use in the analysis of Metals

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Aluminum	< 80	Calcium (all HDPE)	< 100	Magnesium	< 100	Selenium	< 2
Antimony	< 5	Chromium	< 10	Manganese	< 10	Silver	< 5
Arsenic	< 2	Cobalt	< 10	Mercury	< 0.2	Sodium	< 5000
Barium	< 20	Copper	< 10	Nickel	< 20	Sodium (all HDPE)	< 100
Beryllium	< 0.5	Iron	< 50	Potassium	< 750	Thallium	< 5
Cadmium	< 1	Lead	< 2	Potassium (all HDPE)	< 100	Vanadium	< 10
Calcium	< 500					Zinc	< 10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	< 100	Fluoride	< 20	Nitrite	< 50	Sulfate	< 100
Cyanide	< 10	Nitrate	< 20	Paraquat (amber only)	< 0.4	Sulfide	< 30
Diquat (amber only)	< 1.0					Sulfite	< 1000

Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	< 5	Acenaphthylene	< 5	Anthracene	< 5
Benzo(a)anthracene	< 5	Benzo(a)pyrene	< 5	Benzo(b)fluoranthene	< 5
Benzo(k)fluoranthene	< 5	Benzo(g,h,i)perylene	< 5	Benzoic Acid	< 20
Benzyl Alcohol	< 5	4-Bromophenyl-phenylether	< 5	Butylbenzylphthalate	< 5
4-Chloroaniline	< 5	4-Chloro-3-methylphenol	< 5	bis-(2-Chloroethoxy)methane	< 5
bis-(2-Chloroethyl)ether	< 5	bis-(2-Chloroisopropyl)ether	< 5	2-Chloronaphthalene	< 5
2-Chlorophenol	< 5	4-Chlorophenyl-phenylether	< 5	Chrysene	< 5
Di-n-butylphthalate	< 5	Di-n-octylphthalate	< 5	Dibenzo(a,h)anthracene	< 5
Dibenzofuran	< 5	1,2-Dichlorobenzene	< 5	1,4-Dichlorobenzene	< 5
1,3-Dichlorobenzene	< 5	3,3'-Dichlorobenzidine	< 5	2,4-Dichlorophenol	< 5
Diethylphthalate	< 5	Dimethylphthalate	< 5	2,4-Dimethylphenol	< 5
4,6-Dinitro-2-methylphenol	< 20	2,4-Dinitrophenol	< 20	2,4-Dinitrotoluene	< 5
2,6-Dinitrotoluene	< 5	bis-(2-Ethylhexyl)phthalate	< 5	Fluoranthene	< 5
Fluorene	< 5	Hexachlorobenzene	< 5	Hexachlorobutadiene	< 5
Hexachlorocyclopentadiene	< 5	Hexachloroethane	< 5	Indeno(1,2,3-cd)pyrene	< 5
Isophorone	< 5	2-Methylnaphthalene	< 5	2-Methylphenol	< 5
4-Methylphenol	< 5	2-Nitroaniline	< 20	3-Nitroaniline	< 20
4-Nitroaniline	< 20	N-Nitroso-di-n-propylamine	< 5	N-Nitrosodimethylamine	< 5
N-Nitrosodiphenylamine	< 5	Naphthalene	< 5	Nitrobenzene	< 5
2-Nitrophenol	< 5	4-Nitrophenol	< 20	Pentachlorophenol	< 20
Phenanthrene	< 5	Phenol	< 5	Pyrene	< 5
1,2,4-Trichlorobenzene	< 5	2,4,5-Trichlorophenol	< 20	2,4,6-Trichlorophenol	< 5
Azobenzene	< 5	Carbazole	< 5	Aldrin	< 0.01
4,4'-DDD	< 0.02	Endosulfan II	< 0.02	Alpha-BHC	< 0.01
4,4'-DDE	< 0.02	Endosulfan Sulfate	< 0.02	Beta-BHC	< 0.01
4,4'-DDT	< 0.02	Endrin	< 0.02	Delta-BHC	< 0.01
Dieldrin	< 0.02	Endrin Aldehyde	< 0.02	Gamma-BHC	< 0.01
Endosulfan I	< 0.01	Heptachlor	< 0.01	Heptachlor Epoxide	< 0.01
Methoxychlor	< 0.10	Endrin Ketone	< 0.02	Alpha-Chlordane	< 0.01
Gamma-Chlordane	< 0.01	Toxaphene	< 0.30	Aroclor-1016	< 0.20
Aroclor-1221	< 0.20	Aroclor-1232	< 0.20	Aroclor-1242	< 0.20
Aroclor-1248	< 0.20	Aroclor-1254	< 0.20	Aroclor-1260	< 0.20
Aroclor-1262	< 0.20	Aroclor-1268	< 0.20		

Group 3. Glass Sample Containers for use in the analysis of Volatiles

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	< 5	1,3-Dichloropropane	< 1	Benzene	< 1
2,2-Dichloropropane	< 1	Bromobenzene	< 1	1,2-Dichloropropane	< 1
Bromodichloromethane	< 1	trans-1,3-Dichloropropene	< 1	Bromoform	< 1
cis-1,3-Dichloropropene	< 1	Bromomethane	< 1	1,1-Dichloropropene	< 1
2-Butanone	< 5	Ethylbenzene	< 1	tert-Butylbenzene	< 1
Hexachlorobutadiene	< 1	sec-Butylbenzene	< 1	2-Hexanone	< 5
n-Butylbenzene	< 1	Isopropylbenzene	< 1	Carbon Disulfide	< 1
p-Isopropyltoluene	< 1	Carbon Tetrachloride	< 1	4-Methyl-2-pentanone	< 5
Chlorobenzene	< 1	Methylene Chloride	< 2	Chloroethane	< 1
Naphthalene	< 1	Chloroform	< 1	n-Propylbenzene	< 1
Chloromethane	< 1	Styrene	< 1	2 & 4 Chlorotoluene	< 1
1,1,2,2-Tetrachloroethane	< 1	1,2-Dibromo-3-chloropropane	< 1	Tetrachloroethene	< 1
Dibromochloromethane	< 1	Toluene	< 1	1,2-Dibromoethane (EDB)	< 1
1,2,3-Trichlorobenzene	< 1	Dibromomethane	< 1	1,2,4-Trichlorobenzene	< 1
1,4-Dichlorobenzene	< 1	1,1,2-Trichloroethane	< 1	1,3-Dichlorobenzene	< 1
1,1,1-Trichloroethane	< 1	1,2-Dichlorobenzene	< 1	Trichloroethene	< 1
Dichlorodifluoromethane	< 1	Trichlorofluoromethane	< 1	1,2-Dichloroethane	< 1
1,2,3-Trichloropropane	< 1	1,1-Dichloroethane	< 1		
trans-1,2-Dichloroethene	< 1	1,3,5-Trimethylbenzene	< 1		
Vinyl Acetate	< 5	1,1-Dichloroethene	< 1		
Xylenes (total)	< 1	1,2,4-Trimethylbenzene	< 1		
Vinyl Chloride	< 1	cis-1,2-Dichloroethene	< 1		

Please keep this certificate for your records and to facilitate any necessary correspondence.
If additional information is required, contact our Technical Service Department at (800) 443-1689.

Randy E. Benson

Randy E. Benson
Corporate Quality Assurance Manager

300COA
8/12/94



APPENDIX C
CHAIN-OF-CUSTODY FORMS



ENVIRONMENTAL

CHAIN OF CUSTODY

26TH.
QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 Project Name : MW1 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No Sampler(s): <u>[Signature]</u> Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: ___/___/___ Lab Number: <u>502042</u>				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information														Sample Temp °C: ___ Sample Cond.: ___ Sealed? ___																																																																																																																																																																																																																																																																																										
				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Type of Sampling: Composite(C) Grab(G)</th> <th>**SEE REVERSE SIDE**</th> <th>(P) Potable (NP) Non-Potable</th> <th>Wet Chem - E.C., pH Cont. 16oz.(p)</th> <th>TOC Cont. 250ml(at)-H₂SO₄</th> <th>TOX Cont. 250ml(at)-H₂SO₄</th> <th>Wet Chem - Cl, SO₄ Cont. 32oz.(p)</th> <th>EPA 601 Cont. 40ml(v) STK</th> <th>Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO₃</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>G</td> <td>MW</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>MW</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>MW</td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>MW</td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>MW</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td>MW</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>															Type of Sampling: Composite(C) Grab(G)	**SEE REVERSE SIDE**	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	Wet Chem - Cl, SO ₄ Cont. 32oz.(p)	EPA 601 Cont. 40ml(v) STK	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO ₃									G	MW		1															G	MW			1														G	MW				1													G	MW					1												G	MW						3											G	MW							1																																																																																																																																																																						
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Misc. Notes:				Relinquished By: <u>[Signature]</u> Date: <u>3-29-95</u> Time: <u>12:40 PM</u>				Relinquished By: <u>[Signature]</u> Date: <u>3/29/95</u> Time: <u>9:55</u>				Relinquished By: _____ Date: _____ Time: _____																																																																																																																																																																																																																																																																																																
Final Sample Disposition:				Received by: <u>[Signature]</u> Date: <u>3/29/95</u> Time: <u>12:40</u>				Received by: <u>[Signature]</u> Date: <u>3/29/95</u> Time: <u>11:55</u>				Received by: <u>[Signature]</u> Date: <u>3/31/95</u> Time: _____																																																																																																																																																																																																																																																																																																
Lab Disposal: ___/___/___ Returned to Client				Meth. of Disposal: _____ Date Ret: _____				_____				_____																																																																																																																																																																																																																																																																																																

Corporate Offices & Laboratory
 P.O. Box 272 - 853 Corporation Street
 Santa Paula, CA 93061-0272
 TEL: (805) 659-0910
 FAX: (805) 525-4172

Relinquished by:
S Berrington 3/30/95
 Rec'd by: [Signature]

Office and Laboratory
 2500 Stagecoach Road
 Stockton, CA 95215
 TEL: (209) 942-0181
 FAX: (209) 942-0423

Field Office
 Visalia, California
 TEL: (209) 734-9473
 Mobile: (209) 731-2399

REC'D APR 12 1995



CHAIN OF CUSTODY

26 T/H.
~~QUARTERLY~~

~~Laboratory Copy (1 of 3)~~

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information																									
Project Name : MW3 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				Type of Sampling: Composite(C) Grab(G)																									
Sampler(s): Comp sampler setup Date: / / Time: : Rush Results due By: / / Date Received: / / Lab Number: 502043				**SEE REVERSE SIDE**																									
Samp Num				Location/Description				Date Sampled		Time Sampled		Type of Sample		(P) Potable (NP) Non-Potable		Wet Chem - E.C., pH Cont. 16oz.(p)		TOC Cont. 250ml(at)-H2SO4		TOX Cont. 250ml(at)-H2SO4		Wet Chem - Cl, SO4 Cont. 32oz.(p)		EPA 601 Cont. 40ml(v)		Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO3		Sample Temp °C: Sample Cond.: Sealed?	
1		MW3/A/ 26		3/29/95		1145		G MW				1																	
2		MW3/B/ 26		11		1148		G MW				1																	
3		MW3/C/ 26		11		1151		G MW						1															
4		MW3/H/ 26		11		1154		G MW								1													
5		MW3/O/ 26		11		1157		G MW										3											
6		MW3/R/ 26		11		1204		G MW												1									
Misc. Notes:				Relinquished By: 3-29-95 1240 PM				Relinquished By: 3/29/95 1455				Relinquished By:				Date: Time:													
Final Sample Disposition:				Received by: 3/29/95 1240				Received by: 3/29/95 1455				Received by:				Date: Time:													
Lab Disposal: / / Returned to Client				Meth. of Disposal: Date Ret. / /				Relinquished by: SBerrumgren 3/30/95				Relinquished by: SBerrumgren 3/30/95				Relinquished by:				Date: Time:									
Corporate Offices & Laboratory P.O. Box 272 / 853 Corporation Street Santa Paula, CA 93061 0272 TEL: (805) 659 0910 FAX: (805) 525 4172				Office and Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209) 942 0181 FAX: (209) 942 0423				Field Office Visalia, California TEL: (209) 734 9473 Mobile: (209) 737 2399																					



CHAIN OF CUSTODY

26TH.
~~QUARTERLY~~

~~Laboratory Copy (1 of 3)~~

[illegible]

Corporate Offices & Laboratory
P.O. Box 272 • 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659 0910
FAX: (805) 525-4172

Relinquished by:
S Berrington 31/30/95
Rcd by:
IDS

Office and Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942 0181
FAX: (209) 942 0423

Field Office
Visalia, California
TEL: (209) 734-9473
Mobile (209) 737 2399

REC'D APR 12 1995



ENVIRONMENTAL

CHAIN OF CUSTODY

26TH.
QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 2-4570				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information																
Project Name : MW5-1A Qtrly 317 Area Monitor. Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				***SEE REVERSE SIDE**																
Sampler(s): <i>[Signature]</i> Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: <i>3/29/95</i> Lab Number: <i>502045</i>																				
Samp Num	Location/Description	Date Sampled	Time Sampled	Type of Sampling: Composite(C) Grab(G)	Type of Sample	(P) Potable (NP) Non-Potable	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	EPA 601 STK Cont. 40ml(v)											Sample Temp °C: ___ Sample Cond.: ___ Sealed? ___
1	MW5/B ₂ 6/1A	3/29/95	1033	G	MW		1													
2	MW5/C ₂ 6/1A	11	1034	G	MW			1												
3	MW5/O ₂ 6/1A	11	1035	G	MW				3											
Misc. Notes:				Relinquished By: <i>[Signature]</i> 3-29-95 12:40 PM				Relinquished By: <i>[Signature]</i> 3/29/95 1455				Relinquished By: <i>[Signature]</i> 3/31/95								
Final Sample Disposition:				Received by: <i>[Signature]</i> 3/29/95 1240				Received by: <i>[Signature]</i> 3/29/95 1455				Received by: <i>[Signature]</i> 3/31/95								
Lab Disposal: ___/___/___ Returned to Client				Meth. of Disposal: ___ Date Ret. ___/___/___																

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659 0910
FAX: (805) 525 4172

Relinquished by: *S Berrington* 3/30/95
R'd by: *UPS Recd*

Office and Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942 0181
FAX: (209) 942 0423

Field Office
Visalia, California
TEL: (209) 734 9473
Mobile: (209) 737 2399



ELI WHITTON ET AL

CHAIN OF CUSTODY

26TH
QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 2-4570				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information											
Project Name : MW6 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No															
Sampler(s): <i>[Signature]</i> Comp sampler setup Date: __/__/__ Time: __: __ Rush Results due By: __/__/__ Date Received: __/__/__ Lab Number: 502046															
Sample Num	Location/Description	Date Sampled	Time Sampled	Type of Sampling: Composite(C) Grab(G)	Type of Sample	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	Wet Chem - Cl, SO ₄ Cont. 32oz.(p)	EPA 601 Cont. 40ml(v)	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO ₃	Sample Temp °C: Sample Cond.: Sealed? ___		
1	MW6/A/ 26	3/29/95	0935	G	MW		1								
2	MW6/B/ 26	"	0938	G	MW			1							
3	MW6/C/ 26	"	0942	G	MW				1						
4	MW6/H/ 26	"	0945	G	MW					1					
5	MW6/O/ 26	"	0948	G	MW						3				
6	MW6/R/ 26	"	0955	G	MW							1			
Misc. Notes:				Relinquished By: <i>[Signature]</i> 3/29/95 1240 PM				Relinquished By: <i>[Signature]</i> 3/29/95 1455				Relinquished By: <i>[Signature]</i> 3/31/95			
Final Sample Disposition:				Received by: <i>[Signature]</i> 3/29/95 1240				Received by: <i>[Signature]</i> 3/29/95 1455				Received by: <i>[Signature]</i> 3/31/95			
Lab Disposal: __/__/__ Returned to Client															
Meth. of Disposal: Date Ret. / /															

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659-0910
FAX: (805) 525-4172

Relinquished by:
SBerrington 3/30/95
Red by: UPS Red

Office and Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181
FAX: (209) 942-0423

REC'D APR 12 1995

Field Office
Visalia, California
TEL: (209) 734-9473
Mobile: (209) 737-2399



ENVIRONMENTAL

CHAIN OF CUSTODY

26TH.
QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 2-4570				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information																		
Project Name : MW6-1A Qtrly 317 Area Monitor. Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No																						
Sampler(s): <i>[Signature]</i> Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: ___/___/___ Lab Number: 502047																						
Samp Num	Location/Description	Date Sampled	Time Sampled	Type of Sampling: Composite(C) Grab(G)	**SEE REVERSE SIDE**	Type of Sample	(P) Potable (NP) Non-Potable	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	EPA 601 Cont. 40ml(v) STK											Sample Temp °C: ___ Sample Cond.: ___ Sealed? ___	
1	MW6/B/26/1A	3/27/95	0958	G	MW			1														
2	MW6/C/26/1A	11	0959	G	MW				1													
3	MW6/D/26/1A	11	1000	G	MW					3												
Misc. Notes:				Relinquished By: <i>[Signature]</i> Date: 3-29-95 Time: 12:40 PM				Relinquished By: <i>[Signature]</i> Date: 3/29/95 Time: 1455				Relinquished By: <i>[Signature]</i> Date: 3/29/95 Time: 1455										
Final Sample Disposition:				Received by: <i>[Signature]</i> Date: 3/29/95 Time: 1340				Received by: <i>[Signature]</i> Date: 3/29/95 Time: 1455				Received by: <i>[Signature]</i> Date: 3/29/95 Time: 1455										
Lab Disposal: ___/___/___ Returned to Client				Meth. of Disposal: ___ Date Ret. ___																		

Corporate Offices & Laboratory
P.O. Box 272 / 853 Corporation Street
Santa Paula, CA 93061-0272
TEL: (805) 659-0910
FAX: (805) 525-4172

Relinquished by:
S Berrington 3/30/95
Rec'd by: *[Signature]*

Office and Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209) 942-0181
FAX: (209) 942-0423

REC'D APR 12 1995

Field Office
Visalia, California
TEL: (209) 734-9473
Mobile: (209) 737-2399



CHAIN OF CUSTODY

26T/f.
~~QUARTERLY~~

~~Laboratory Copy (1 of 3)~~

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 2-4570				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information																			
Project Name : MW10 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				Type of Sampling: Composite(C) Grab(G)	***SEE REVERSE SIDE**	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	Wet Chem - Cl ₂ , SO ₄ Cont. 32oz.(p)	EPA 601 STK Cont. 40ml(V)	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO ₃											
Samp Num	Location/Description		Date Sampled	Time Sampled	Type of Sample	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H ₂ SO ₄	TOX Cont. 250ml(at)-H ₂ SO ₄	Wet Chem - Cl ₂ , SO ₄ Cont. 32oz.(p)	EPA 601 STK Cont. 40ml(V)	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO ₃											
1	MW10/A/	ZL	3/29/95	1045	G	MW	1																
2	MW10/B/	ZL	"	1048	G	MW		1															
3	MW10/C/	ZL	"	1052	G	MW			1														
4	MW10/H/	ZL	"	1055	G	MW				1													
5	MW10/O/	ZL	"	1058	G	MW					3												
6	MW10/R/	ZL	"	1105	G	MW						1											
Misc. Notes:					Relinquished By: _____ Date: Time: 3-29-95 1240 PM					Relinquished By: _____ Date: Time: 3/29/95 1455					Relinquished By: _____ Date: Time: _____								
Final Sample Disposition:					Received by: SBerrington Date: Time: 3/29/95 1240 PM					Received by: SBerrington Date: Time: 3/29/95 1455					Received by: Y. Starr Date: Time: 3/31/95								
Lab Disposal: _____ Returned to Client																							
Meth. of Disposal: _____ Date Ret. ____																							
Corporate Offices & Laboratory P.O. Box 272 / 853 Corporation Street Santa Paula, CA 93061-0272 TEL: (805) 659 0910 FAX: (805) 525 4172					Relinquished by: SBerrington 3/30/95 Red by: UPS					Office and Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209) 942 0181 FAX: (209) 942 0423					Field Office Visalia, California TEL: (209) 734 9473 Mobile: (209) 737 2399								

APPENDIX D

SAMPLE ANALYSES REQUEST FORMS

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: BERMITE 26TH. QTRLY SAMPLING 317 AREA
 Sampler Name: GLEN ABDUN-NUR/TIM BRICKER Tele. No. (805) 259-2241
 Name of Person Receiving Samples: Stacey Berrington
 Date Samples Received: 3/29/95
 Internal Temperature of Sample Container: 0
 Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	PH, EC	TOC	TOX	SULFATE, CHLORIDE	TCE BY 601	IRON, MANGANESE, SODIUM
MW1/A/26	502042	X					
MW1/B/26			X				
MW1/C/26				X			
MW1/H/26					X		
MW1/O/26						X	
MW1/R/26	↓						X
MW3/A/26	502043	X					
MW3/B/26			X				
MW3/C/26				X			
MW3/H/26					X		
MW3/O/26						X	
MW3/R/26	↓						X

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: 317 AREA BERMITE 26TH. GTRLY. SAMPLING
 Sampler Name: GLEN ABDON-NUR/TIM BRICKER Tele. No. (805) 259-2241
 Name of Person Receiving Samples: Stacey Berrington
 Date Samples Received: 3/29/95
 Internal Temperature of Sample Container: 0
 Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	PH, EC	TOC	TOX	SULFATE, CHLORIDE	TCE BY 601	IRON, MANGANESE, SODIUM
MW5/A/26	502044	X					
MW5/B/26			X				
MW5/C/26				X			
MW5/H/26					X		
MW5/O/26						X	
MW5/R/26							X
MW6/A/26	502046	X					
MW6/B/26			X				
MW6/C/26				X			
MW6/H/26					X		
MW6/O/26						X	
MW6/R/26							X

SAMPLE ANALYSIS REQUEST

Sampling Information

Project No. 85-01.4 Project Name: 317 AREA
BERMITE 26TH. QTRLY. SAMPLING
 Sampler Name: GLEN ABDUN-NUR/TIM BRICKER Tele. No. (805) 259-2241
 Name of Person Receiving Samples: Stacey Berrington
 Date Samples Received: 3/29/95
 Internal Temperature of Sample Container: 0
 Notes on Samples: _____

Analysis Required

Sample I.D.	Laboratory I.D.	PH, EC	TOC	TOX	SULFATE, CHLORIDE	TCE BY GC/MS	IRON, MANGANESE, SODIUM
MW10/A/26	502048	X					
MW10/B/26			X				
MW10/C/26				X			
MW10/H/26					X		
MW10/I/26						X	
MW10/R/26							X
MW5/B/26/1A	502045		X				
MW5/C/26/1A				X			
MW5/O/26/1A						X	
MW6/B/26/1A	502047		X				
MW6/C/26/1A				X			
MW6/O/26/1A						X	

APPENDIX E

FGL QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROGRAM

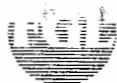
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(To be Included in Final Report)

APPENDIX F

BLANK, DUPLICATE, AND SPIKE SAMPLE ANALYTICAL REPORTS



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

INORGANIC Quality Assurance Report for sample: 502042

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	20B	200.7	ug/L-mg/L	50	ND		LCS	1000	105	86-113		MS	556	104	105	92-113	0.9	6.7	
Manganese	50B	200.8	ug/L-mg/L	0.50	ND		LCS	50.0	96.3	75-125		MS	83.3	79.4	76.1	75-125	1.5	20.0	
Sodium	20B	200.7	ug/L-mg/L	1.0	ND		LCS	100	103	75-125		MS	22.2	99.0	97.4	75-125	1.3	20.0	
Chloride	70C	300.0	mg/L	1.0	ND		CCV	72.5	102	90-110		MS	224	91.5	90.7	85-111	0.5	4.1	
Conductivity	50B	120.1	umhos/cm2		N/A		LCS	10000	100	97-105		Dup	1360	N/A	N/A	N/A	0.7	0.8	
pH	00A	150.1	units		N/A		LCS	8.00	101	97-101		Dup	7.46	N/A	N/A	N/A	0.1	1.4	
Sulfate	70C	300.0	mg/L	1.0	ND		CCV	65.5	98.4	90-110		MS	185	104	97.7	75-123	6.3	2.8	410

FGL ID = 19950329 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

Notes:

410 Matrix Spike (MS) not within Acceptance Range (AR) and/or Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Batch qualified based on the LCS, CCV, or ICV recovery.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KW/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502042

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

KAD/DHN:c1

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502042

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

TMB:jgc

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

INORGANIC Quality Assurance Report for sample: 502043

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	20B	200.7	ug/L-mg/L	50	ND		LCS	1000	105	86-113		MS	556	104	105	92-113	0.9	6.7	
Manganese	50C	200.8	ug/L-mg/L	0.50	ND		LCS	50.0	97.7	75-125		MS	83.3	93.6	91.2	75-125	2.6	20.0	
Sodium	20B	200.7	ug/L-mg/L	1.0	ND		LCS	100	103	75-125		MS	22.2	99.0	97.4	75-125	1.3	20.0	
Chloride	70C	300.0	mg/L	1.0	ND		CCV	72.5	102	90-110		MS	224	91.5	90.7	85-111	0.5	4.1	
Conductivity	50B	120.1	umhos/cm2		N/A		LCS	10000	100	97-105		Dup	1360	N/A	N/A	N/A	0.7	0.8	
pH	00A	150.1	units		N/A		LCS	8.00	101	97-101		Dup	7.46	N/A	N/A	N/A	0.1	1.4	
Sulfate	70C	300.0	mg/L	1.0	ND		CCV	65.5	98.4	90-110		MS	185	104	97.7	75-123	6.3	2.8	410

FGL ID = 19950329 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

Notes:
410 Matrix Spike (MS) not within Acceptance Range (AR) and/or Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Batch qualified based on the LCS, CCV, or ICV recovery.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KW/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502043

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502043

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20	

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

TMB:jgc

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

INORGANIC Quality Assurance Report for sample: 502044

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	20B	200.7	ug/L-mg/L	50	ND		LCS	1000	105	86-113		MS	556	104	105	92-113	0.9	6.7	
Manganese	50C	200.8	ug/L-mg/L	0.50	ND		LCS	50.0	97.7	75-125		MS	83.3	93.6	91.2	75-125	2.6	20.0	
Sodium	20B	200.7	ug/L-mg/L	1.0	ND		LCS	100	103	75-125		MS	22.2	99.0	97.4	75-125	1.3	20.0	
Chloride	70C	300.0	mg/L	1.0	ND		CCV	72.5	102	90-110		MS	224	91.5	90.7	85-111	0.5	4.1	
Conductivity	50B	120.1	umhos/cm2		N/A		LCS	10000	100	97-105		Dup	1360	N/A	N/A	N/A	0.7	0.8	
pH	00A	150.1	units		N/A		LCS	8.00	101	97-101		Dup	7.46	N/A	N/A	N/A	0.1	1.4	
Sulfate	70C	300.0	mg/L	1.0	ND		CCV	65.5	98.4	90-110		MS	185	104	97.7	75-123	6.3	2.8	410

FGL ID = 19950329 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

Notes:

410 Matrix Spike (MS) not within Acceptance Range (AR) and/or Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Batch qualified based on the LCS, CCV, or ICV recovery.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KW/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502044

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0	

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502044

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20	

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director

TMB:jgc



FGL ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502045

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV NOTE
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



FGL ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502045

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20	

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director

TMB:jgc



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

INORGANIC Quality Assurance Report for sample: 502046

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	20B	200.7	ug/L-mg/L	50	ND		LCS	1000	105	86-113		MS	556	104	105	92-113	0.9	6.7	
Manganese	50C	200.8	ug/L-mg/L	0.50	ND		LCS	50.0	97.7	75-125		MS	83.3	93.6	91.2	75-125	2.6	20.0	
Sodium	20B	200.7	ug/L-mg/L	1.0	ND		LCS	100	103	75-125		MS	22.2	99.0	97.4	75-125	1.3	20.0	
Chloride	70C	300.0	mg/L	1.0	ND		CCV	72.5	102	90-110		MS	224	91.5	90.7	85-111	0.5	4.1	
Conductivity	50B	120.1	umhos/cm2		N/A		LCS	10000	100	97-105		Dup	1360	N/A	N/A	N/A	0.7	0.8	
pH	00A	150.1	units		N/A		LCS	8.00	101	97-101		Dup	7.46	N/A	N/A	N/A	0.1	1.4	
Sulfate	70C	300.0	mg/L	1.0	ND		CCV	65.5	98.4	90-110		MS	185	104	97.7	75-123	6.3	2.8	410

FGL ID = 19950329 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

Notes:

410 Matrix Spike (MS) not within Acceptance Range (AR) and/or Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Batch qualified based on the LCS, CCV, or ICV recovery.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KW/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502046

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0	

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502046

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20	

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

TMB:jgc

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502047

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus , CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502047

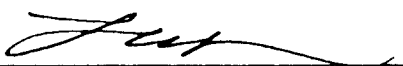
Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV NOTE
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1


Kurt Wilkinson, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

TMB:jgc

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

INORGANIC Quality Assurance Report for sample: 502048

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	20B	200.7	ug/L-mg/L	50	ND		LCS	1000	105	86-113		MS	556	104	105	92-113	0.9	6.7	
Manganese	50C	200.8	ug/L-mg/L	0.50	ND		LCS	50.0	97.7	75-125		MS	83.3	93.6	91.2	75-125	2.6	20.0	
Sodium	20B	200.7	ug/L-mg/L	1.0	ND		LCS	100	103	75-125		MS	22.2	99.0	97.4	75-125	1.3	20.0	
Chloride	70D	300.0	mg/L	1.0	ND		CCV	72.5	104	90-110		MS	224	103	104	85-111	0.9	4.1	
Conductivity	50B	120.1	umhos/cm2		N/A		LCS	10000	100	97-105		Dup	1360	N/A	N/A	N/A	0.7	0.8	
pH	00A	150.1	units		N/A		LCS	8.00	101	97-101		Dup	7.46	N/A	N/A	N/A	0.1	1.4	
Sulfate	70D	300.0	mg/L	1.0	ND		CCV	65.5	100	90-110		MS	185	104	103	75-123	1.0	2.8	

FGL ID = 19950329 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KW/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502048

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOC	02A	TOC	mg/L	LCS	59.0	98.3	75-125		MS	50.0	102	96.0	75-125	6.1	20.0	

FGL ID = 19950404 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 13, 1995

ORGANIC Quality Assurance Report for sample: 502048

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	ug/L	CCV	100	113	75-125		MS	100	122	121	75-125	0.8	20

FGL ID = 19950410 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

Kurt Wilkinson, QA/QC Director

KAD/DHN:c1



ENVIRONMENTAL

Analytical Chemists

April 5, 1995

ORGANIC Quality Assurance Report for samples: 502042-502048

Bermite Division of Whittaker
22116 W. Soledad Can. Rd.
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
Trichloroethylene	03A	601	ug/L	LCS	5.00	90.3	75-125		BS	5.00	79.3	83.9	75-125	5.7	20.0

FGL ID = 19950403 N/A => Not Applicable NOTE => See note indicated below.

TMB:jgc

FGL ENVIRONMENTAL, INC.

Tom M. Bartanen, QA/QC Director

APPENDIX G

ANALYTICAL REPORTS FOR BACKGROUND WATER QUALITY PARAMETERS AND GROUND WATER MONITORING PARAMETERS



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/A/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 3, 1995

QA/QC ID# : 50204201-


Analytical Results

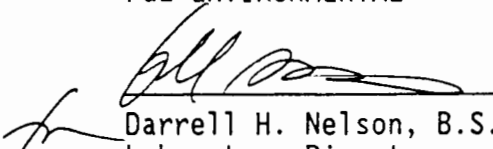
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	770
pH	150.1	units	---	7.5

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/B/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

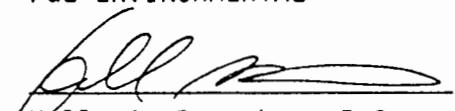
TOTAL ORGANIC CARBON

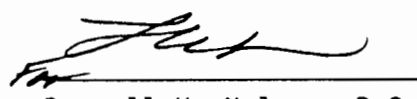
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/C/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	ND	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

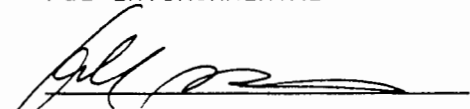
ug/L = Micrograms Per Liter (ppb)

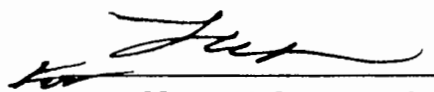
ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-4

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/H/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 5, 1995

QA/QC ID# : 50204204-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	160
Sulfate	300.0	mg/L	2.0*	12

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
* = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Kurt Wilkinson, B.S.
Inorganic Lab Manager

Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-5

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/O/26

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

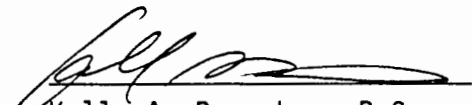
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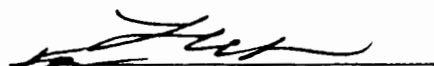
CONSTITUENT	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502042-6

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/R/26

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 4, 1995

QA/QC ID# : 50204206-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	60	300
Manganese	200.8	ug/L	0.5	1.6	50
Sodium	200.7	mg/L	1	49	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) HNO₃ pH < 2 Containers: (a) Plastic

If you have any questions, please call.

Kurt Wilkinson, B.S.
Inorganic Lab Manager

KW/DHN:c1

FGL ENVIRONMENTAL

Darrell H. Nelson, B.S.
Laboratory Director



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317

Description: MW3/A/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 3, 1995

QA/QC ID# : 50204301-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	620
pH	150.1	units	---	7.7

DLR = Detection Limit for Reporting Purposes.

ND = Not Detected at or above the DLR.


ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

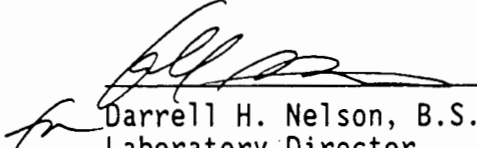
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C (2) H2SO4 pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/B/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

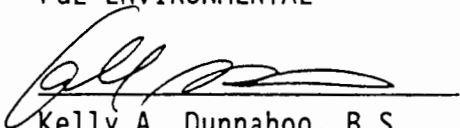
TOTAL ORGANIC CARBON

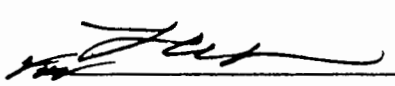
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/C/26
Sampled by : Abdun-Nur/Bricker
Container : Amber Glass TFE-Cap
Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995
Received : March 29, 1995
Extracted : N/A
Analyzed : April 10, 1995
QA/QC ID# : SP 95041000A A

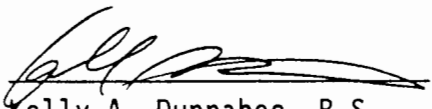
TOTAL ORGANIC HALOGENS

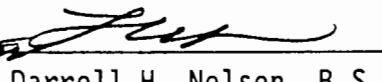
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	7	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-4

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317

Description: MW3/H/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 5, 1995

QA/QC ID# : 50204304-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	28
Sulfate	300.0	mg/L	2.0*	71

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
* = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) H2SO4 pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Kurt Wilkinson, B.S.
Inorganic Lab Manager

Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-5

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/O/26

Sampled by: Abdun-Nur/Bricker

Container: VOA

Preservatives:

Sampled: March 29, 1995

Received: March 29, 1995

Extracted: N/A

Analyzed: April 3, 1995

QA/QC ID#: SP 95040300K A

EPA METHOD 601

CONSTITUENT	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager

Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502043-6

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317

Description: MW3/R/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 4, 1995

QA/QC ID# : 50204306-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	ND	300
Manganese	200.8	ug/L	0.5	0.8	50
Sodium	200.7	mg/L	1	49	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) HNO₃ pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Kurt Wilkinson, B.S.
Inorganic Lab Manager

Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/A/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 3, 1995

QA/QC ID# : 50204401-


Analytical Results

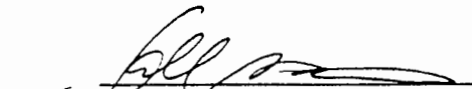
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	540
pH	150.1	units	---	7.7

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


to Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/B/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

TOTAL ORGANIC CARBON

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

mg/L = Milligrams Per Liter (ppm)

ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager

Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/C/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	6	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

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Organic Laboratory Manager

Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-4

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/H/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 5, 1995

QA/QC ID# : 50204404-

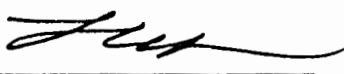
Analytical Results

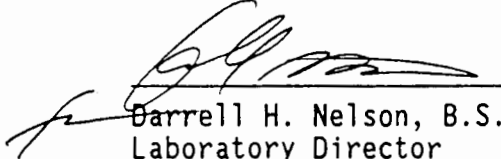
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	40
Sulfate	300.0	mg/L	2.0*	32

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
* = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-5

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/O/26

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

EPA METHOD 601

CONSTITUENT	SAMPLE	SAMPLE	LAB	BLANK
	DLR	RESULTS	DLR	RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager

Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502044-6

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/R/26

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 4, 1995

QA/QC ID# : 50204406-


Analytical Results

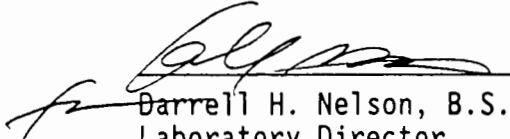
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	70	300
Manganese	200.8	ug/L	0.5	1.3	50
Sodium	200.7	mg/L	1	51	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) HNO₃ pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502045-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/B/26/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

TOTAL ORGANIC CARBON

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager

Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502045-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/C/26/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS

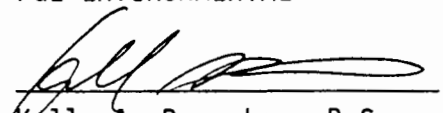
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	ND	5	ND

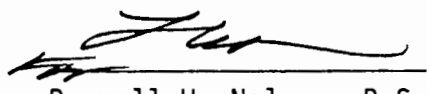
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


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Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502045-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/O/26/1A

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

EPA METHOD 601

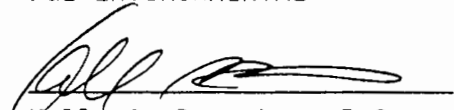
CONSTITUENT	SAMPLE DLR ug/L	SAMPLE RESULTS ug/L	LAB DLR ug/L	BLANK RESULTS ug/L
Trichloroethylene	0.5	ND	0.5	ND

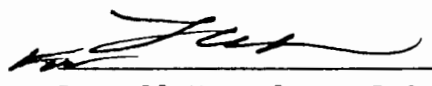
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


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Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/A/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 3, 1995

QA/QC ID# : 50204601-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	580
pH	150.1	units	---	7.8

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.


ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

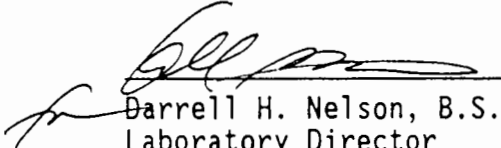
* = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/B/26

Sampled by: Abdun-Nur/Bricker

Container: Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled: March 29, 1995

Received: March 29, 1995

Extracted: N/A

Analyzed: April 4, 1995

QA/QC ID#: SP 95040400A A

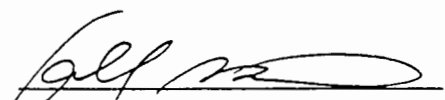
TOTAL ORGANIC CARBON

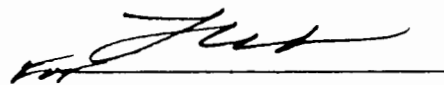
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/C/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS


CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	7	5	ND

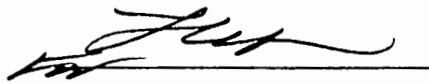
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-4

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/H/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 5, 1995

QA/QC ID# : 50204604-

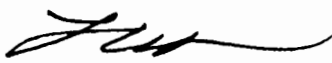
Analytical Results

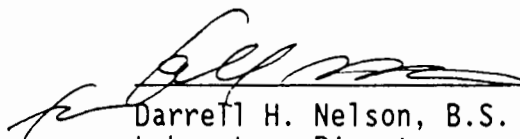
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	62
Sulfate	300.0	mg/L	2.0*	30

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
* = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-5

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/O/26

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

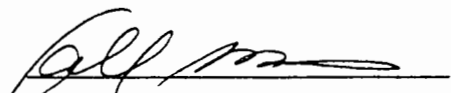
EPA METHOD 601

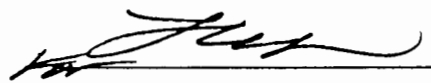
CONSTITUENT	SAMPLE DLR ug/L	SAMPLE RESULTS ug/L	LAB DLR ug/L	BLANK RESULTS ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502046-6

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/R/26

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 4, 1995

QA/QC ID# : 50204606-

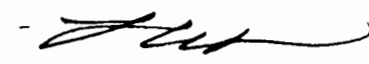
Analytical Results

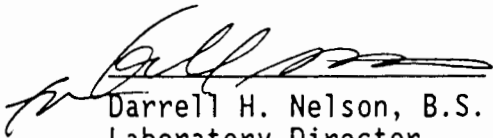
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	110	300
Manganese	200.8	ug/L	0.5	1.3	50
Sodium	200.7	mg/L	1	51	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) HNO₃ pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


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Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502047-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/O/26/1A

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

EPA METHOD 601

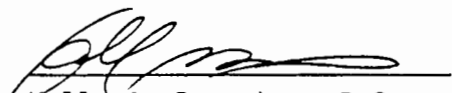
CONSTITUENT	SAMPLE DLR ug/L	SAMPLE RESULTS ug/L	LAB DLR ug/L	BLANK RESULTS ug/L
Trichloroethylene	0.5	ND	0.5	ND

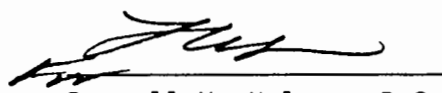
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
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KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502047-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/B/26/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

TOTAL ORGANIC CARBON

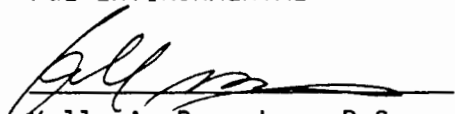
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	1.7	0.5	ND

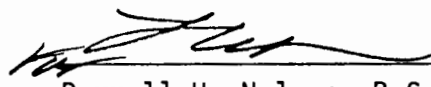
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502047-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/C/26/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS

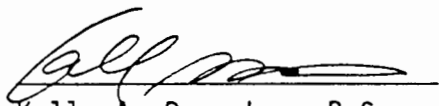
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	ND	5	ND

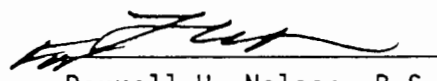
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


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Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

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ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-1

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/A/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 3, 1995

QA/QC ID# : 50204801-

Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	610
pH	150.1	units	---	7.9

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.

ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

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Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-2

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/B/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 4, 1995

QA/QC ID# : SP 95040400A A

TOTAL ORGANIC CARBON

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)


mg/L = Milligrams Per Liter (ppm)

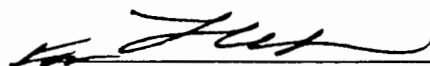
ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
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Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-3

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/C/26

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 10, 1995

QA/QC ID# : SP 95041000A A

TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	8	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

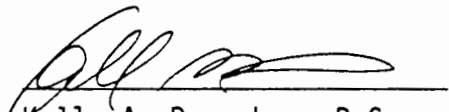
ug/L = Micrograms Per Liter (ppb)

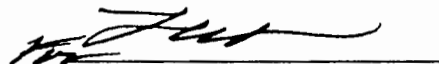
ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-4

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/H/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 5, 1995

QA/QC ID# : 50204804-

Analytical Results

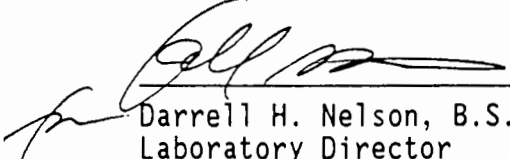
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	62
Sulfate	300.0	mg/L	2.0*	37

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
* = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-5

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Organic Analysis
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/O/26

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : March 29, 1995

Received : March 29, 1995

Extracted : N/A

Analyzed : April 3, 1995

QA/QC ID# : SP 95040300K A

EPA METHOD 601

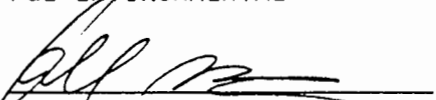
CONSTITUENT	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

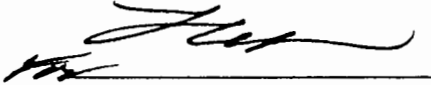
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.

* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL


Kelly A. Dunnahoo, B.S.
Organic Laboratory Manager


Darrell H. Nelson, B.S.
Laboratory Director

KAD/DHN:c1



ENVIRONMENTAL

ANALYTICAL CHEMISTS

April 13, 1995

LAB No: SP 502048-6

Bermite Division of Whittaker
22116 W. Soledad Canyon Road
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/R/26

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : March 29, 1995

Received : March 29, 1995

Completed : April 4, 1995

QA/QC ID# : 50204806-


Analytical Results

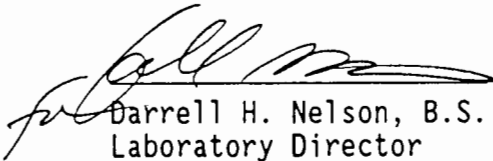
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	70	300
Manganese	200.8	ug/L	0.5	1.2	50
Sodium	200.7	mg/L	1	77	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) Cool 4°C (2) HNO₃ pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL


Kurt Wilkinson, B.S.
Inorganic Lab Manager


Darrell H. Nelson, B.S.
Laboratory Director

KW/DHN:c1

APPENDIX H
STATISTICAL ANALYSES

TABLE H-1
TWENTY-SIXTH QUARTER SAMPLING EVENT

Parameter	Units	Tolerance Limit	Well No.		
			MW-5	MW-6	MW-10
Chloride	mg/l	183	40	62	62
pH		7.04/7.99	7.7	7.8	7.9
Specific Conductance	$\mu\text{mhos/cm}$	769.9	540	580	610
Sulfate	mg/l	105	32	30	37
Iron	$\mu\text{g/l}$	247	70	110	70
Manganese	$\mu\text{g/l}$	26.1	1.3	1.3	1.2
Sodium	mg/l	59.3	51	51	77
TCE	$\mu\text{g/l}$	0.5 ^a	<0.5	<0.5	<0.5
TOC	mg/l	3.37	<0.5	<0.5	<0.5
TOX	$\mu\text{g/l}$	61.1	6	7	8

Note: All tolerance limits are upper limits except pH which has both upper and lower limits.

^aTolerance limit set at detection limit.

TABLE H-2

CONCENTRATIONS OF GROUND WATER MONITORING PARAMETERS
IN SAMPLES FROM BACKGROUND MONITORING WELL MW-1

Date	Quarter	pH ^a	Conductance ^a (µmhos/cm ²)	TOC ^a (mg/l)	TOX ^a (µg/l)	SO ₄ ²⁻ (mg/l)	Cl ⁻ (mg/l)	Fe (µg/l)	Mn (µg/l)	Na (mg/l)	TCE (µg/l)
10/04/88 ^b	1	7.5	598	<3	<100	11					<5
01/25/89	2	7.48	572	2.4 ^c	<100	22					
04/17/89	3	7.2		<3	<100	11					
07/27/89	4	7.48	500	2.4 ^c	<100	13					
10/31/89	5	7.6	524	<3	<100	10	83				
01/25/90	6	7.4	570	<3	<100	16	85				
04/17/90	7	7.55	504	<4	<20	11	88				
07/17/90	8	8.28	530	<4	<20	10	82				
10/18/90	9	7.4	544	<1	75 ^c	23	98				
01/29/91	10	7.5	573	1.4	<5	8	96				
04/23/91	11	7.68	559	1.8	<5	10	100				
07/19/91	12	7.33	575	1.2	<5	11	97				
10/08/91 ^d	--	--	--	--	--	--	--				
03/13/92	14	7.5	639	0.4 ^c	<5	13	131				
04/21/92	15	7.5	643	<0.5	<5	9	130				
07/29/92	16	7.55	660	<0.5	6.9	11	133				
10/20/92	17	7.5	676	<0.5	<5	10	138				
01/27/93	18	7.68	707	<0.5	<5	6	137				
06/09/93 ^e	19	7.5	715	<0.5	<5	9	134	250	<30	52	
07/14/93	20	--	--	--	--	--	--	220	<30	46	
08/11/93	20	--	--	--	--	--	--	60	<30	54	
09/22/93	20	7.5	720	<0.5	9	13	161	100	<30	52	
12/08/93	21	7.4	726	<0.5	<5	10	151	50	<30	57	
03/10/94	22	7.5	730	>0.5	<5	10	150	200	<30	48	<0.5
06/22/94	23	7.5	740	<0.5	<5	15	150	150	<30	54	<0.5
09/14/94	24	7.4	750	<0.5	8	9	160	60	2.5	57	<0.5
12/14/94	25	7.5	770	<0.5	<5	10	150	80	4	51	<0.5
03/29/95	26	7.5	770	<0.5	<5	12	160	60	1.6	49	<0.5

^aEach value is the average result from four replicate samples.

^bSamples from 01/27/88, 07/29/88, 08/15/88, and 10/04/88 reported TCE at <5 µg/l.

^cThe replicates included a portion with results below the detection limit. The average was calculated after assigning a value of one-half the detection limit for the samples below the detection limit.

^dNot sampled because water elevation dropped below elevation of sampling pump intake.

^eSingle sample. Replicates no longer taken.

TABLE H-3
CONCENTRATIONS OF GROUND WATER MONITORING PARAMETERS
IN SAMPLES FROM BACKGROUND MONITORING WELL MW-3

Date	Quarter	pH ^a	Conductance ^a (µmhos/cm ²)	TOC ^a (mg/l)	TOX ^a (µg/l)	SO ₄ ²⁻ (mg/l)	Cl ⁻ (mg/l)	Fe (µg/l)	Mn (µg/l)	Na (mg/l)	TCE (µg/l)
10/04/88 ^b	1	7.48	699	<3	361.25	73					<5
01/25/89	2	7.73	664	<3	<100	74					
04/17/89	3	7.3		<3	<100	9					
07/27/89	4	7.5	661	<3	<100	65					
10/31/89	5	7.53	617	<3	<100	68	35				
01/25/90	6	7.18	641	7.1 ^c	<100	74	36				
04/17/90	7	7.33	590	<4	<20	60	46				
07/17/90	8	8.23	589	<4	<20	67	39				
10/18/90	9	7.63	642	0.7 ^c	<100	15	34				
01/29/91	10	7.28	656	2.2	<5	80	54				
04/23/91	11	7.55	629	2.0	<5	77	34				
07/19/91	12	7.23	633	1.3	<5	85	45				
10/09/91	13	7.65	642	<0.5	<5	34	37				
03/13/92	14	7.45	648	0.6	3.3 ^c	85	33				
04/21/92	15	7.5	644	<0.5	<5	81	37				
07/29/92	16	7.55	643	0.34 ^c	<5	74	33				
10/20/92	17	7.55	641	<0.5	<5	67	34				
01/27/93	18	7.6	640	<0.5	<5	69	30				
06/09/93 ^d	19	7.6	627	<0.5	<5	70	28	50	<30	48	
09/14/94	24	7.4	750	<0.5	8	9	160	60	2.5	57	<0.5
07/14/93	20	--	--	--	--	--	--	<50	<30	44	
08/11/93	20	--	--	--	--	--	--	<50	<30	50	
09/22/93	20	7.4	630	<0.5	<5	87	37	<50	<30	50	
12/08/93	21	7.4	627	<0.5	<5	72	35	<50	<30	54	
03/10/94	22	7.4	620	<0.5	<5	74	31	<50	<30	47	<0.5
06/22/94	23	7.6	630	<0.5	8 ^e	71	29	<50	<30	53	<0.5
09/14/94	24	7.5	630	<0.5	<5	80	31	<50	0.7	52	<0.5
12/14/94	25	7.6	630	<0.5	<5	69	28	<50	<1	48	<0.5
03/29/95	26	7.7	620	<0.5	7	71	28	<50	0.8	49	<0.5

^aEach value is the average result from four replicate samples.

^bSamples from 02/17/88, 05/27/88, 07/19/88, 08/15/88, and 10/04/88 reported TCE at <5 µg/l.

^cThe replicates included a portion with results below the detection limit. The average was calculated after assigning a value of one-half the detection limit for the samples below the detection limit.

^dSingle sample. Replicates no longer taken.

^eDuplicate sample analytical result also 8 µg/l.

TABLE H-4

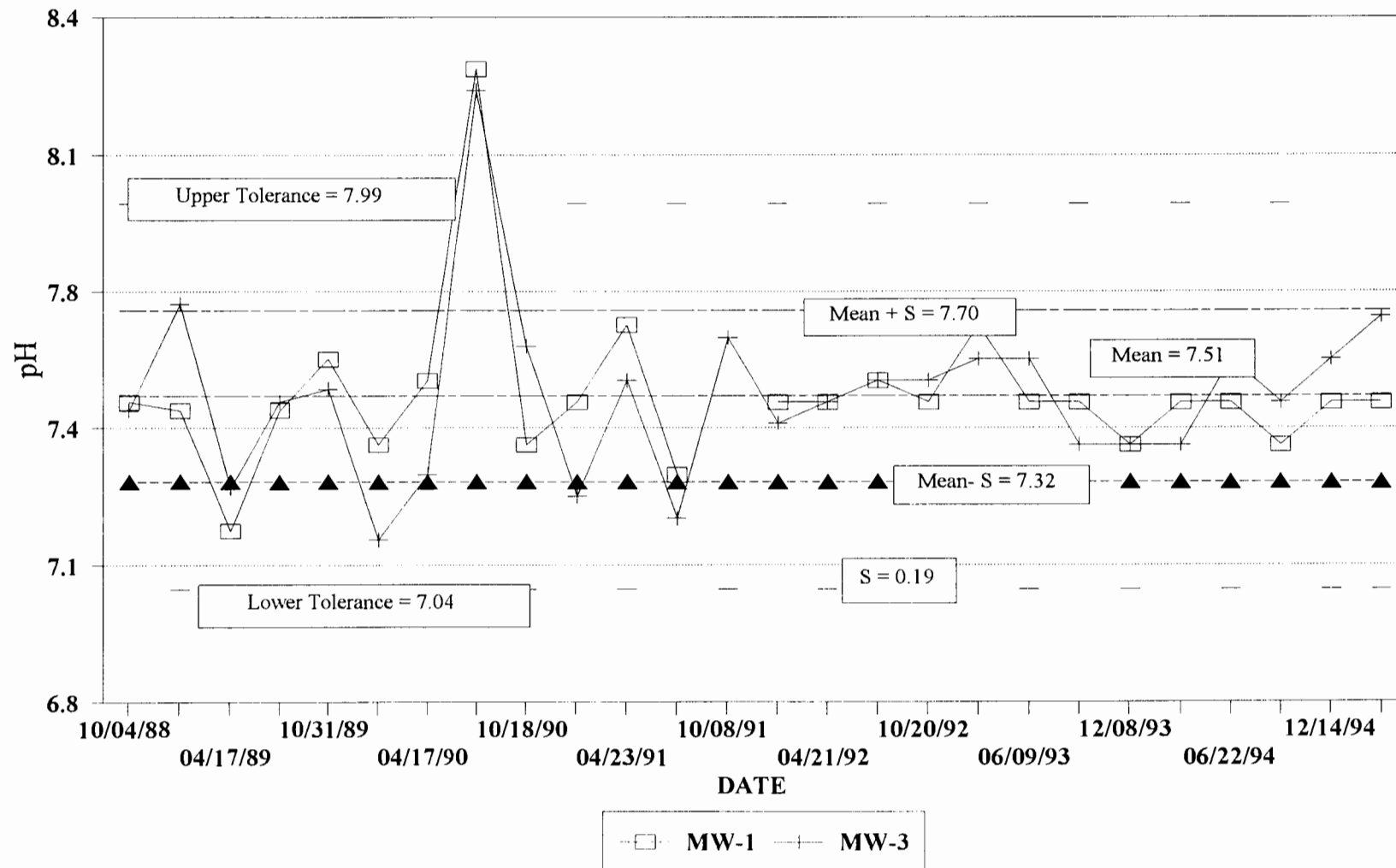
TOLERANCE LIMIT CALCULATIONS

	pH	Conductance	TOC	TOX	Chloride	Sulfate	Iron	Manganese	Sodium
Σx	383.4	31,188	51.84	824.7	3,388	2,044	1,505	220	1016
n (number of samples)	51	49	51	50	43	51	20	20	20
\bar{x} (mean)	7.51	636	1.02	16.5	78.8	40.1	75.3	11.0	50.8
s (sample standard deviation)	0.20	64.7	1.14	21.6	49.5	31.3	71.8	6.3	3.53
k (from tables)	2.374	2.070	2.059	2.065	2.106	2.059	2.396	2.396	2.396
Upper Tolerance Limit ^a	7.99	769.9	3.37	61.1	183	105	247	26.1	59.3
Lower Tolerance Limit ^b	7.04								

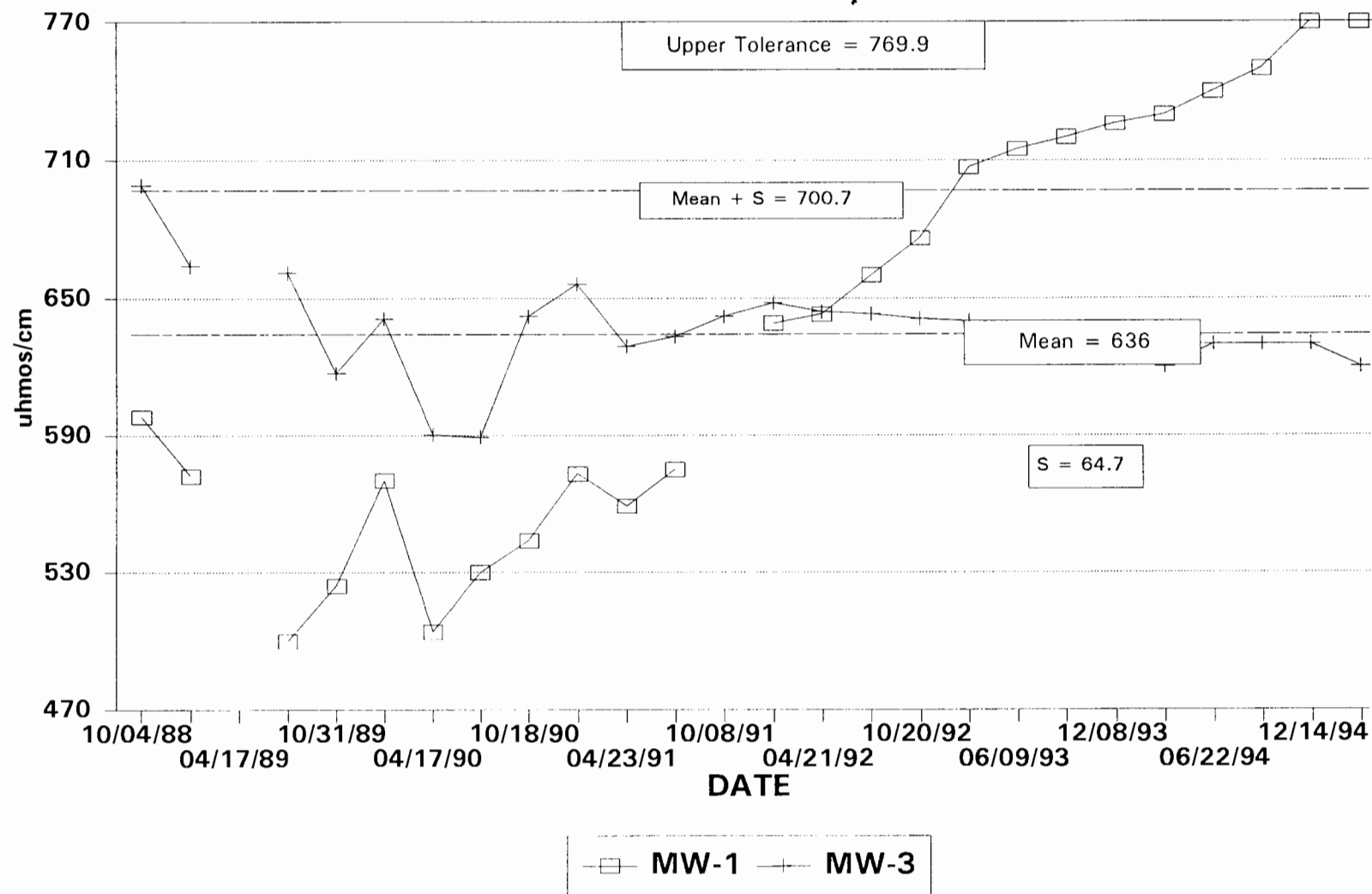
^aUpper Tolerance Limit = $\bar{x} + ks$.

^bLower Tolerance Limit = $\bar{x} - ks$.

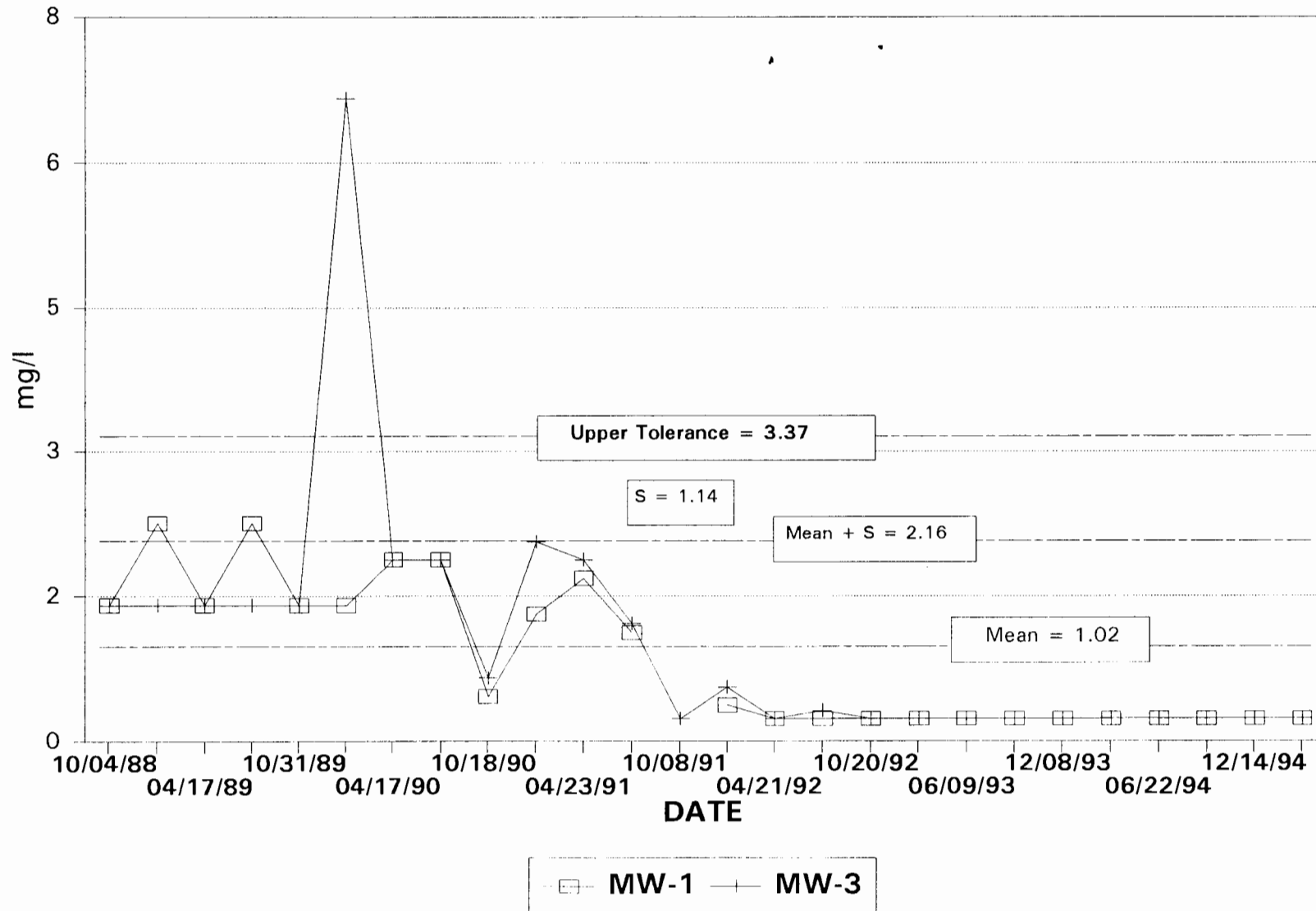
pH MONITORING WELLS MW-1 AND MW-3



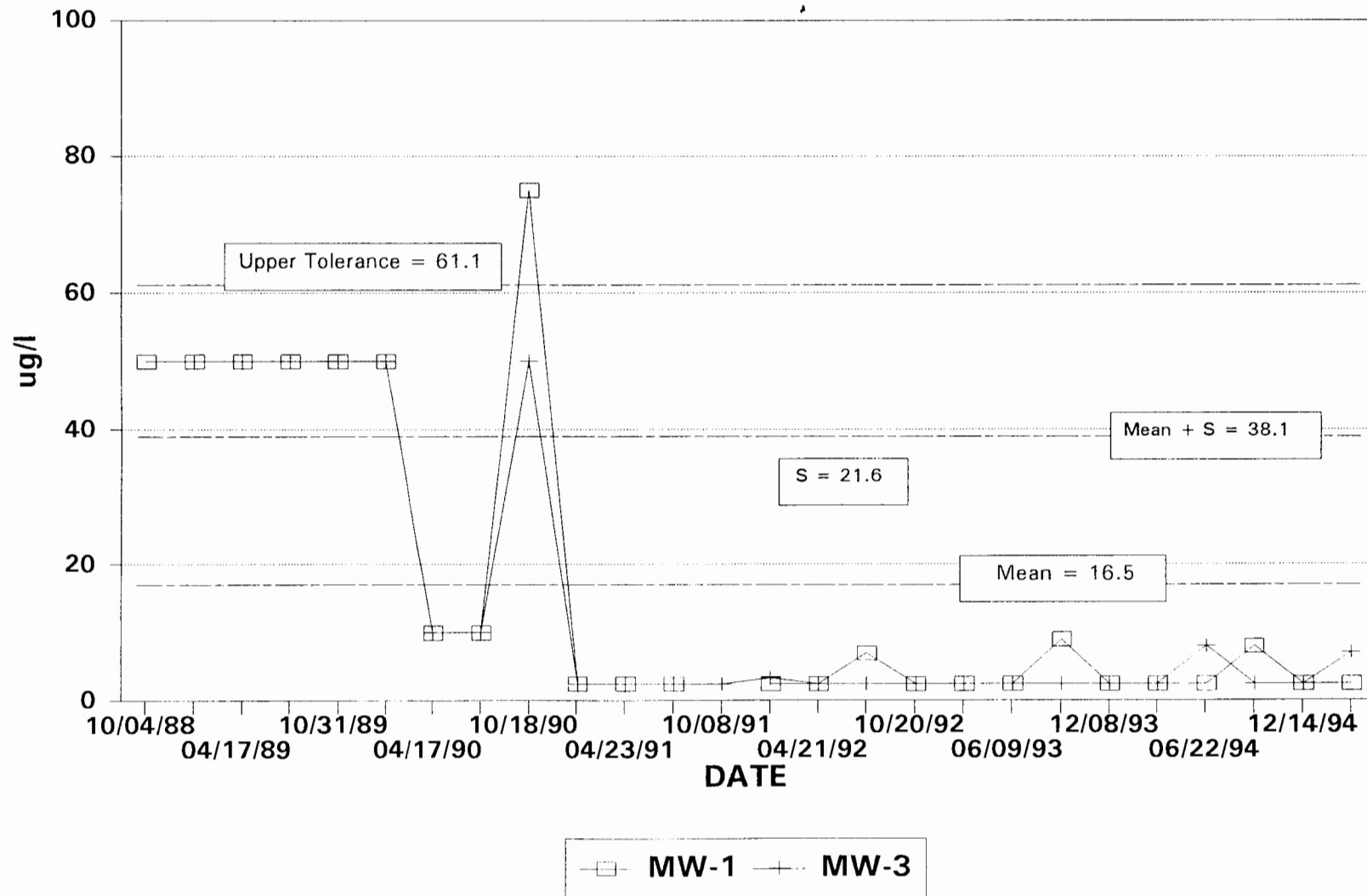
SPECIFIC CONDUCTANCE MONITORING WELLS MW-1 AND MW-3



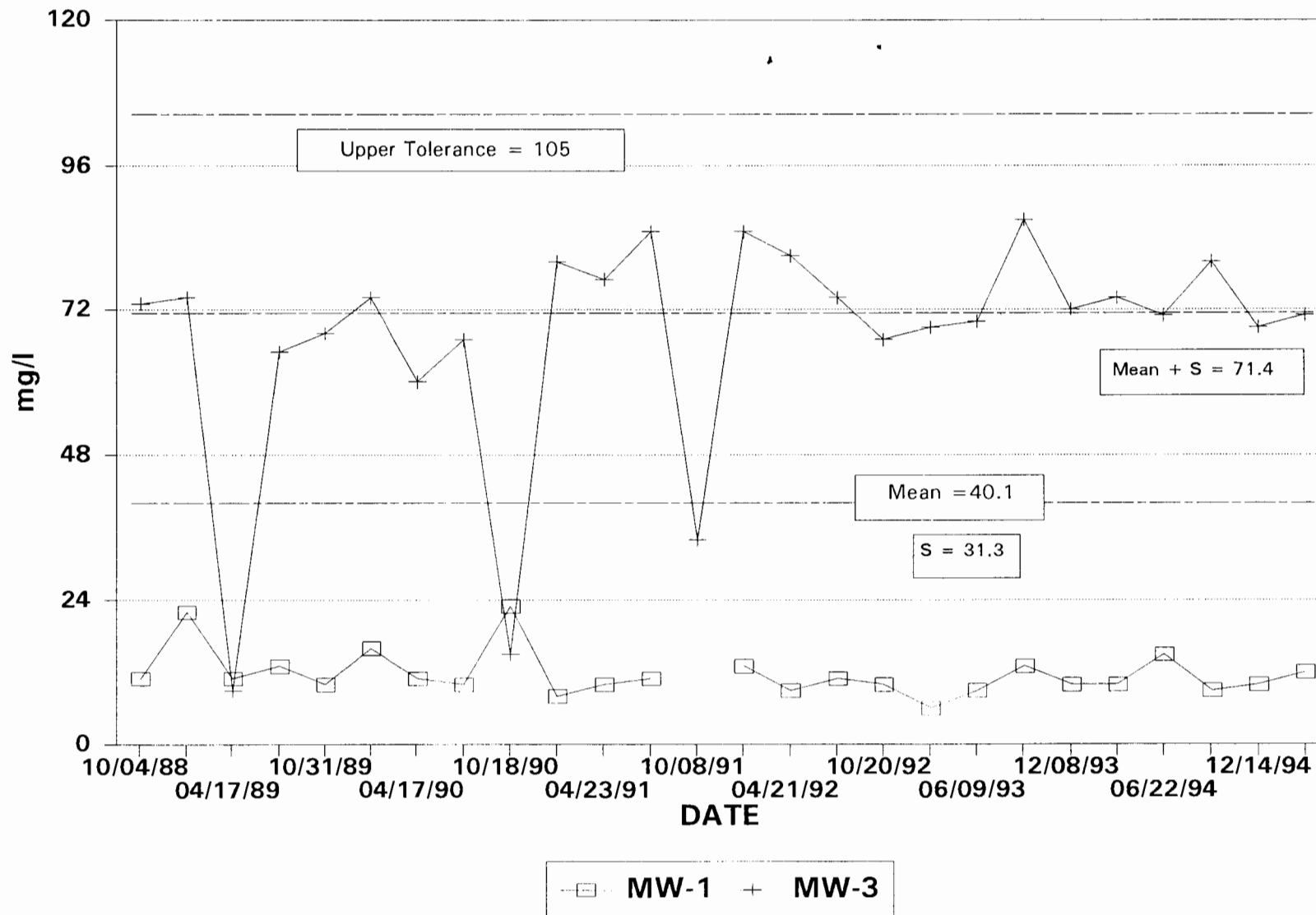
TOTAL ORGANIC CARBON MONITORING WELLS MW-1 AND MW-3



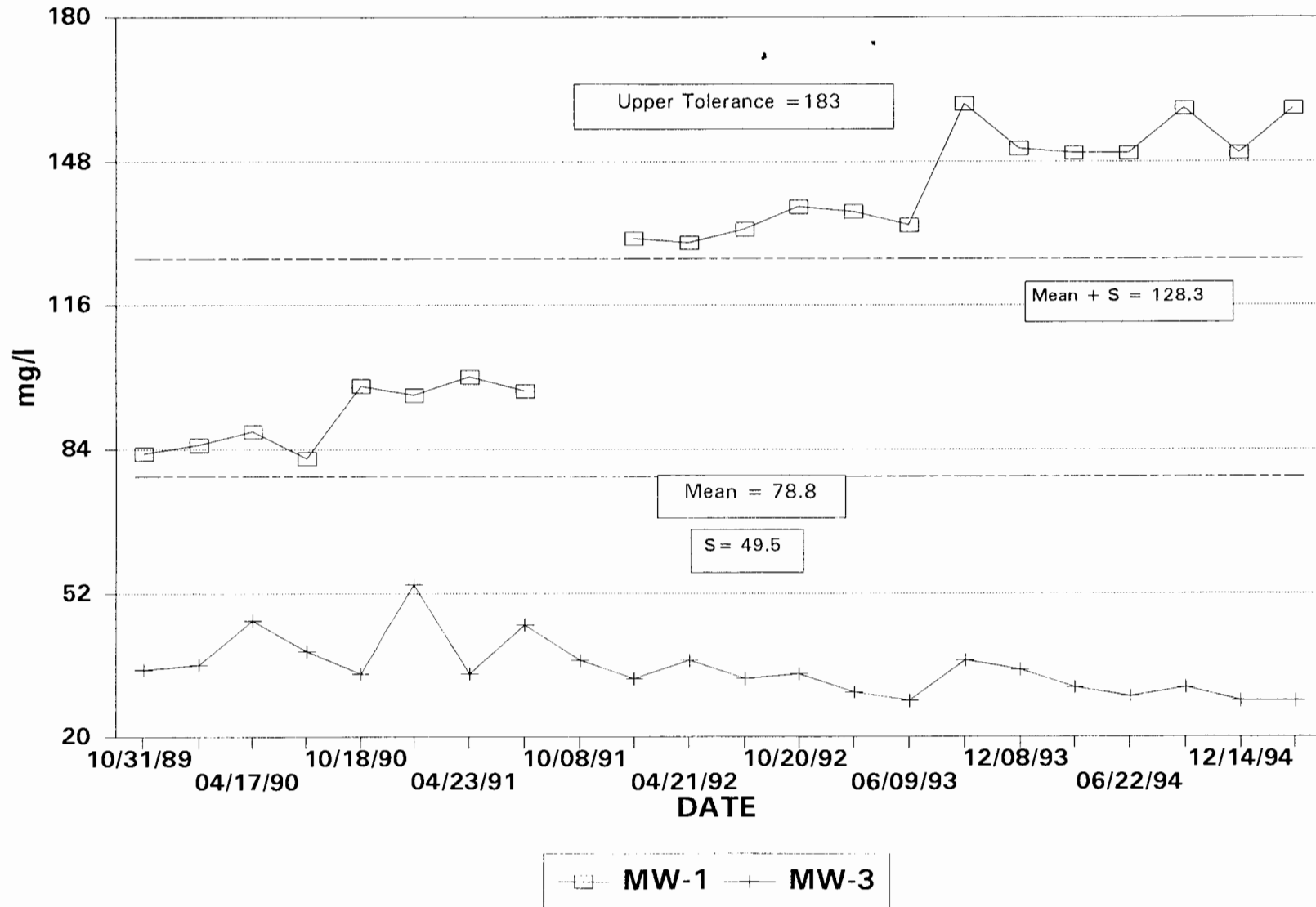
TOTAL ORGANIC HALOGENS MONITORING WELLS MW-1 AND MW-3



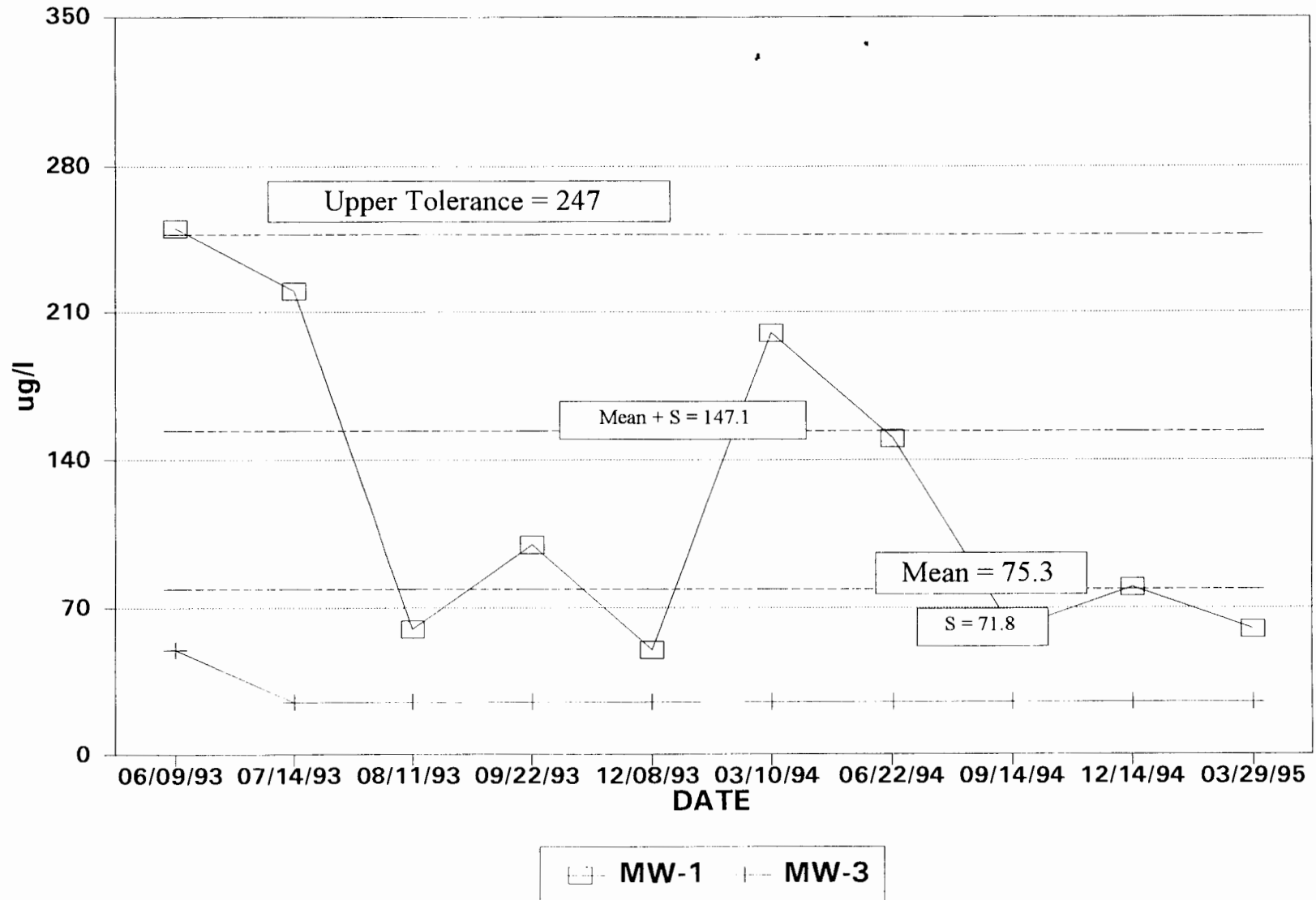
SULFATE MONITORING WELLS MW-1 AND MW-3



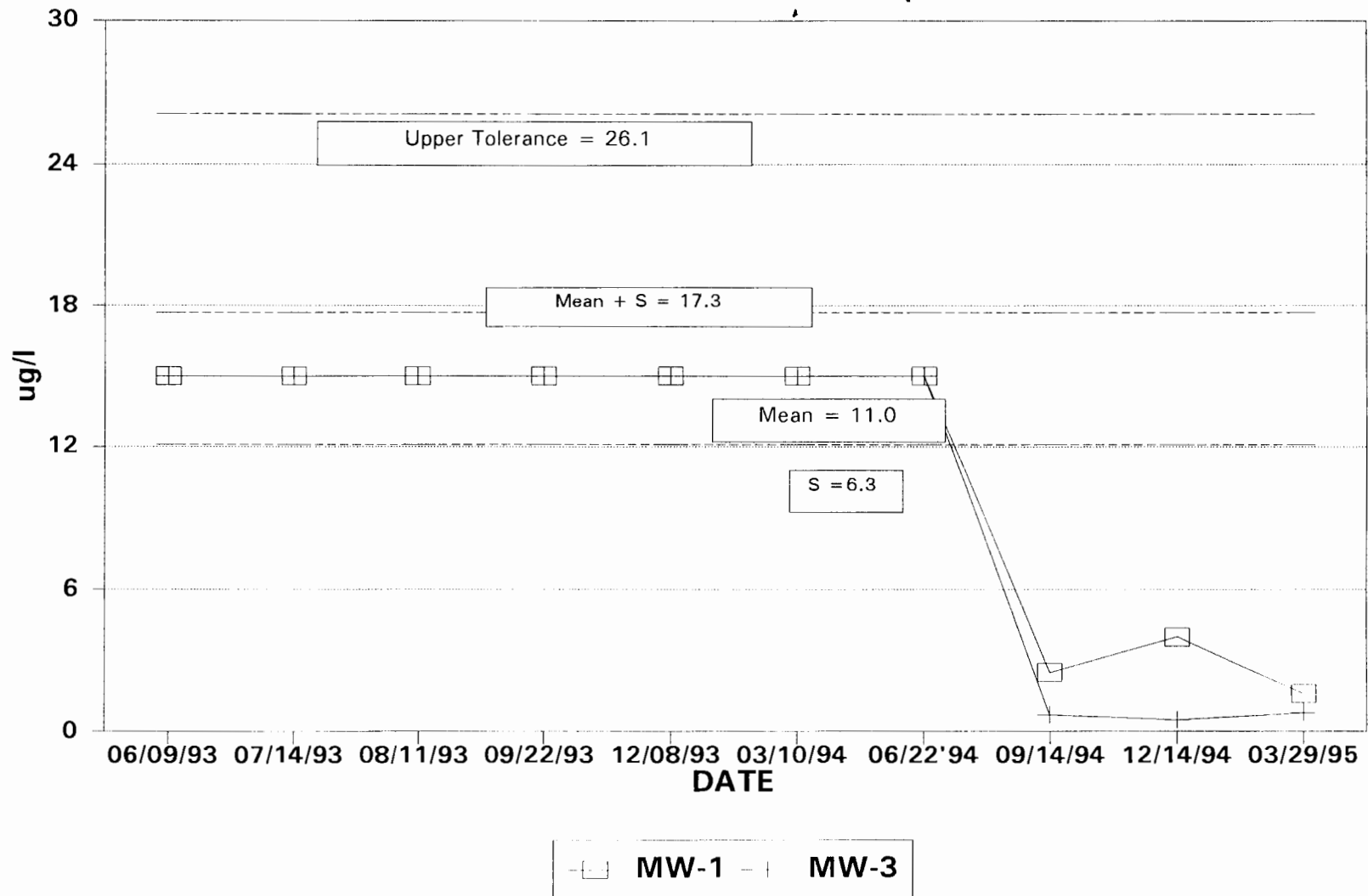
CHLORIDE MONITORING WELLS MW-1 AND MW-3



IRON MONITORING WELLS MW-1 AND MW-3



MANGANESE MONITORING WELLS MW-1 AND MW-3



SODIUM MONITORING WELLS MW-1 AND MW-3

